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OHIO PROGRAMS FOR VISUALLY HANDICAPPED CHILDREN. A REPORT ON THE 1964-65 COLUMBUS, OHIO STUDY OF PARTIALLY SEEING.

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THIS STUDY INVESTIGATED THE DECLINING ENROLLMENT IN OHIO'S PROGRAMS FOR PARTIALLY SEEING CHILDREN AND THE PROBLEMS OF INCIDENCE, VISUAL FUNCTIONING, AND MULTIPLE HANDICAPS. PARTIALLY SEEING CHILDREN IDENTIFIED BY THE STUDY HAD A VISUAL ACUITY AFTER CORRECTION OF 20/70 OR LESS AND/OR CORRECTION OF MORE THAN 10 DIOPTERS OF MYOPIA. THE SCHOOL NURSES IN COLUMBUS PUBLIC SCHOOLS SCREENED THE 23,611 FOURTH, FIFTH, AND SIXTH GRADE CHILDREN FOR VISUAL ACUITY. OF THE 214 CHILDREN SUSPECTED OF BEING PARTIALLY SEEING, 168 RECEIVED PARENTAL APPROVAL FOR OPHTHALMOLOGICAL AND OPTOMETRIC EXAMINATIONS. THE 36 CHILDREN IDENTIFIED AS PARTIALLY SEEING RECEIVED PEDIATRIC, NEUROLOGICAL, ELECTROENCEPHALOGRAPHIC, AND PSYCHOLOGICAL EXAMINATIONS. OF THESE 36 CHILDREN, 25 WERE ALREADY IN CLASSES FOR PARTIALLY SEEING. FINDINGS SUGGEST AN INCIDENCE OF BETWEEN .15 AND .20 PERCENT. MANY OF THE PARTIALLY SEEING CHILDREN HAD ADDITIONAL PHYSICAL OR MENTAL IMPAIRMENTS. ONLY 17 PERCENT OF THE CHILDREN HAD REFRACTIVE ERRORS. THE MEAN AVERAGE IQ ON INDIVIDUAL INTELLIGENCE TESTS WAS AT THE LOW AVERAGE LEVEL. MEAN ACHIEVEMENT WAS BELOW GRADE LEVEL EXPECTANCY. RECOMMENDATIONS INCLUDE DEVELOPMENT OF PROGRAMS WHICH COMBINE LARGE TYPE AND BRAILLE STUDENTS, ELIMINATION OF THE 10 DIOPTERS OF MYOPIA AS A SOLE CRITERIA IN REFERRAL, AND EMPHASIS ON EARLY IDENTIFICATION AND REGISTRATION OF PARTIALLY SIGHTED CHILDREN. FUTURE RESEARCH WITH THE DIVISION OF SPECIAL EDUCATION SHOULD BE DIRECTED TO STUDIES OF INSTRUCTIONAL METHODS AND THE CHILDREN'S NEEDS AND TO COMPARABLE STUDY IN A RURAL COMMUNITY AND A CITY LIKE COLUMBUS IN A STATE OTHER THAN OHIO. OTHER CONCLUSIONS AND RECOMMENDATIONS ARE LISTED. GRAPHS AND TABLES ARE INCLUDED. THE APPENDIX DISPLAYS STATE STANDARDS AND FORMS, TOGETHER WITH FORMS USED IN THE STUDY. THE CASE HISTORIES OF THE 36 PARTIALLY SEEING CHILDREN ARE PRESENTED IN TABULAR FORM. A LIST OF 18 REFERENCES IS INCLUDED. (KH)

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OHIO PROGRAMS FOR VISUALLY HANDICAPPED CHILDREN

A Report on the 1964-65 Columbus, Ohio Study of Partially Seeing

Issued by
E. E. HOLT
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OHIO PROGRAMS

for

VISUALLY HANDICAPPED CHILDREN

A REPORT ON THE 1964-65 COLUMBUS, OHIO STUDY OF PARTIALLY SEEING

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FOREWORD

This publication was prepared to report the status of partially seeing children as identified in the Columbus study. We believe that the figures and facts in the report reflect the actual picture throughout the state.

There has long been concern in the State Department regarding this area of exceptional children, a concern which seems common among many states. Realizing the need for an objective approach to this concern, Mr. R. A. Horn, former director of the Division of Special Education, encouraged the development of a plan for the study.

Through the co-operation of the Ohio Department of Health, a federal grant was made available for the study and the project was begun in the spring of 1964 in the Columbus Public Schools.

Results of the study indicate the changes in types of partially seeing children enrolled throughout the history of Ohio's program, the incidence of these children in relation to the total school population and the increased incidence of multi-handicapped children referred as visually handicapped.

In suggesting the possible need for changes in the kinds of educational programs offered to this group of children there is no intent to convey criticism of present programs nor to infer in any way that visually handicapped children have not profited from the programs and services provided in the state. There is however, sincere concern that Ohio provide the programs best suited to the needs of the greatest number of visually handicapped children.

The Columbus study has attempted to bring into focus the true picture of the partially seeing child, his abilities and disabilities, his problems and his needs. It has given us a broader view of the visually handicapped child, and with this information it is hoped that we can start planning toward more effective educational programs for visually handicapped children in Ohio.

It is our sincere hope that the publication will serve as a source of information to others interested in the education of the visually handicapped and an encouragement to those seeking ways to develop educational programs to serve the needs of these children.

S. J. Bonham, Jr.
Director, Division of Special Education

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TABLE OF CONTENTS

	Page
Foreword	iii
Acknowledgments	v
Staff and Advisory Committee	vii
Table of Contents	ix
List of Tables	x
Part I: Introduction	1
Part II: A Review of Literature	9
Part III: Procedures for the Columbus, Ohio Study	21
Part IV: Conclusions and Recommendations	37
List of References	40
Appendix A. Ohio State Board of Education Standards and Forms for Visually Handicapped	43
Appendix B. Sample of Forms Used in the Columbus, Ohio Partially Seeing Study 1964-65	69
Appendix C. Teacher Observation Sheet and Responses for Columbus, Ohio Partially Seeing Study (1964-65)	87
Appendix D. Case Histories of Children in the Columbus, Ohio Partially Seeing Study (1964-65)	95

LIST OF TABLES

Table 1 A Description by Grade Level of the Children Screened by School Health Nurses in the 1964-65 Columbus, Ohio Study 24

Table 2 Number of Children Referred by School Health Nurses for Further Examination in Columbus, Ohio Study 1964-65 25

Table 3 Number of Children Confirmed Partially Seeing by the Ophthalmologist and Optometrist in the Columbus, Ohio Study 1964-65 26

Table 4 Listing of Diagnostic Findings on the Students Studied Intensively in the Columbus, Ohio Study 1964-65 . 27

Table 5 A Percentage Distribution of Partially Seeing Children by Diagnostic Classification as it Relates to the Columbus, Ohio Study 28

Table 6 Distribution of Visual Acuity Found in the 1964-65 Columbus, Ohio Partially Seeing Study 29

Table 7 A Comparison of Diagnostic Findings Under Present Standards and Classification Based Solely Upon Visual Acuity in 1964-65 Columbus, Ohio Intensive Study 30

Table 8 Mean Average Mental Ability in the Columbus, Ohio Partially Seeing Study 31

Table 9 I. Q. Distribution of Children in the 1964-65 Columbus, Ohio Partially Seeing Study 31

Table 10 A Comparison of Wide Range Arithmetic Achievement and Mental Maturity in the 1964-65 Columbus, Ohio Partially Seeing Study 33

Table 11 A Comparison of Wide Range Word Recognition Achievement and Mental Maturity in the 1964-65 Columbus, Ohio Partially Seeing Study..... 34

PART 1: INTRODUCTION

The Need for Scientific Study

1. Background

Provision for the education and welfare of exceptional children has traditionally been the function of the Division of Special Education, State Department of Education. This division, in cooperation with local departments of special education under State Board of Education Standards and policy has established standards for services to all types of exceptional children to provide the exceptional child the same educational opportunities available to all children.

Together the state and local departments constantly study and evaluate the many programs included in special education, working closely with advisory committees. Out of such studies have come improved and increased services for all types of exceptional children. Such studies have built sharp awareness of changes in the types and needs of exceptional children referred for special placement and services.

One area in which the greatest changes have been noted is the area of the partially seeing. Ohio has long been concerned over the decreasing number of referrals to programs for partially seeing children and the actual closing of a number of these units. Applications for approval of special education units for partially seeing children submitted to the division have indicated for several years the decreasing number of children identified as partially seeing under present State Board of Education Standards, and an increasing number of children identified as legally but not functionally blind, under present state and national standards.

The Incidence Question

According to the United States Office of Education the number of visually handicapped children in the United States has increased significantly during the past two decades, but the percentage of these children in the total school population has remained comparatively low. It appears that reliable

studies on the actual number of visually handicapped children in the school population are not available. Depending upon definition and the authority quoted they may vary from as high as one out of four or four out of ten or from thirty-six to forty-six per cent.

The most common estimate of incidence of partially seeing children seems to be that of the National Society for the Prevention of Blindness, i.e., one child out of every five hundred of school age enrollment.

In general there is wide disagreement of authorities in regard to the actual incidence of partially seeing children. This factor, combined with Ohio's concern over its apparent decreasing number of partially seeing children, and the desire to provide adequate service to all visually handicapped children made it imperative that a scientific study be made.

Goals of the study would be to attempt to establish an incidence figure, to determine the educational needs of the children in this category and to point to possible changes in the types of services now offered to these children.

The present programs and services for partially seeing children follow basically the same pattern as that used originally when "Sight Saving" programs were established in the state. From time to time efforts have been made to modify eligibility standards to conform to modern thinking in regard to vision and its use in school activities, but it is now becoming apparent that we need to look at other approaches for educating the kinds of visually handicapped children appearing in the school population.

Ohio's Program for Visually Handicapped Children

Ohio's educational programs for visually handicapped children have been in existence since the early 1900's and have always been operated co-operatively so that children in these special units participated in regular classroom activities to some extent. In recent years such units have, in most schools, been established on the resource or itinerant plan, or a combination of these two types of programs.

State Board of Education Standards for special education units and for special services to partially seeing children pro-

vide a guide for local schools to follow in establishing or upgrading their programs. Present standards for eligibility for special placement and for services are:

a. Children having visual acuity of 20/70 or less in the better eye after correction, or children who cannot read smaller than 18 point print at any distance.

b. Children with 10 or more diopters who are referred by the examiner.

c. Partially seeing children of school age with I. Q. of 70 or above.

It is recognized of course, that all children with the same visual acuity do not function in the same way, and that frequently children who appear eligible under existing standards do not need special consideration. On the other hand many children who do not meet eligibility standards as prescribed by the State Board present learning problems that seem directly related to vision.

The schools are encouraged to evaluate each child individually to determine visual functioning ability and attempt to provide the services the child actually needs. These services might include special class placement, special materials, or student reader or tutoring services. Regardless of the original placement and provisions it is considered vitally important that re-evaluation be made regularly and that changes in placement and services be adopted whenever they are indicated. In addition to the information recorded in the annual eye examination reports, schools are encouraged to employ the findings of the school psychologist, the special class resource teacher and the regular classroom teachers in evaluating children's needs.

Educational Evaluation Clinic

One means of providing for complete evaluation of visually handicapped children is through the Educational Clinic, established by the State Board of Education in 1960.

The Educational Clinic Team is made up of an educational specialist, psychologist and an audiologist who examine each of the children referred. All referrals for this procedure must be submitted by the local superintendent of schools in the dis-

trict in which the child legally resides. Clinics are scheduled monthly at the Ohio State School for the Blind. After children are evaluated a report is prepared and submitted to a Review Committee consisting of the State Director of Special Education, the Superintendent of the Ohio State School for the Blind and one other member appointed by the State Superintendent of Public Instruction. Factors determining a youngster's placement are:

1. Availability of local program
2. Individual needs of the child
3. Parental request

A complete report with a letter of recommendation is then forwarded to the local superintendent of schools for his future planning.

While the clinic was established to determine eligibility of children referred to the residential school, it has become increasingly popular with administrators as a body to help them determine placement for many children. More and more referrals are made for children whose visual functioning is questionable, or who appear to present other problems along with a visual handicap.

The clinic records indicating all pertinent date for individual clinic patients point to the possible need for different kinds of programs than have been provided up to now.

A few cities are now providing special education units for slow learning visually handicapped children, under State Board of Education Standards.

The problem of definition is a serious one and will no doubt continue to be for some time, but careful evaluation of each child's abilities as well as his disabilities, and the recognition of his total personality can help school systems in their decisions as to special placement and services.

Since many of the children referred to clinic appear to present added handicaps it has been necessary to supplement the educational team with a medical clinic team. Through the co-operation of the Ohio Department of Health a team of medical specialists has been established to further evaluate children who appear to need a medically diagnostic evaluation. The medical team, made up of a pediatrician, ophthalmologist, otologist, neurologist and personnel from Crippled Children's

Services, sees all children referred by the Educational Clinic team. The findings of this team have been invaluable in the total evaluation of the children, and its recommendations are making it possible for many children to be enrolled in a suitable educational program.

The total clinic procedure is proving most effective in that children are evaluated functionally rather than just from eye examination reports. One very significant result of the clinic service is the data being recorded regarding multi-handicapped children.

A great number of children referred as blind may be legally but not functionally blind or may be totally blind, and in addition, present a perplexing educational problem because of other complicating handicaps. Clinic records to date indicate many children with mild or severe mental retardation, cerebral palsy, brain damage, emotional disturbance, speech defects and mild or severe hearing loss, as well as the visual handicap.

These facts indicate the need for careful study of existing facilities for visually handicapped children, with a view towards possible new types of programs in order to serve these children educationally.

Registry File

In addition, the State Division of Special Education maintains a file on all children with visual problems throughout the state. Emphasis is placed on follow-up for any children reported who are of school age and not enrolled in any type of special program.

Central Registry of Educational Materials for the Visually Handicapped

Another service more recently added to Ohio's services for visually handicapped children is the central registry of materials. The Registry was established through the co-operative efforts of the State Department of Education, The Ohio State School for the Blind and Services for the Blind, Ohio Department of Welfare. The Registry is located at the Ohio State School for the Blind, with a full time secretary and a part time co-ordinator.

All school districts maintaining special education units for visually handicapped children utilize the services of volunteer transcribing groups to provide for materials not available on quota. The materials reproduced locally plus those received from the American Printing House, Inc. have become a serious storage problem for most schools. While the schools wish to maintain a library of Braille, large type, and recorded materials they have found themselves unable to arrange for adequate storage facilities for all of these items.

Besides this important problem they are aware also that in many instances there have been duplications in the reproductions and that much time, energy and money might be saved if there were some central system of registering and storing materials not in use and arranging for loan service. Much thought was given to the problem and several attempts were made to set up such a center.

Through careful early planning with representatives of the local schools, the American Printing House for the Blind, Inc., the Ohio State School for the Blind and the Division of Special Education, arrangements were set up to pattern the Registry after the one maintained by the American Printing House for the Blind, Inc. In this way the Registry can cooperate fully with the American Printing House for the Blind, Inc. without duplication or confusion.

The Registry is making it possible for many visually handicapped students to receive materials quickly and is providing a very beneficial service to schools.

Planning for the Columbus Study

In spite of the many services available to visually handicapped children in Ohio there has been much concern over the facts already discussed, i.e., the decreased enrollment of partially seeing children, the problem of incidence, the question of visual functioning and the high number of multi-handicapped children. Thus, plans were formulated for this study in the fall of 1963.

Through a federal grant made available by the Division of Maternal and Child Health, Ohio Department of Health, the study became a reality and the study plan was established in

the spring of 1964. Project headquarters were established at the Columbus Board of Education with a full time co-ordinator and a half-time secretary.

PART II

A Review of The Literature

Need for Research

The field of research presents many opportunities for fascinating exploration. It is invaluable as a predictor of the future. In fact, research may be loosely defined as an effort to study uncharted ground. The major purpose of educational research according to Eakin, Pratt and McFarland is to discover the effects of certain experimental treatments upon some characteristic of a particular combination (all of any specifically defined group) or to test some hypothesis about the effect of such experimental treatment.[1]

In the field of special education the statement that "we have no research to prove it" has become a squelching phrase which invariably climaxes expressions of philosophy for the education of the partially seeing child. Very often the phrase discredits any beliefs but those which can be proved statistically.[1]

Although nearly two million dollars a year is spent in the United States on eye research, according to a publication of the *American Public Health Association*, a great deal of information is still lacking. Past studies have tended to deal with physical and medical eye research. Although this is important, a great need exists for social, educational and administrative research. (A study that combines several approaches including clinical medicine and education is desirable.)[3]

Hathaway[4] stated that "Research relating to the partially seeing has two important aims in view: 1. Finding the causes of visual difficulties and the possible means of eliminating them. 2. Research regarding ways and means by which those already affected may receive the greatest benefit.

According to Bowers[2] an area of impelling need in special education research is that of materials and teaching techniques best suited to the learning needs of blind and visually impaired children. Studies concerning present teaching practices are needed. In fact, current literature in this field is practically non-existent.

Incidence of Partially Seeing

The number of visually handicapped children has increased significantly during the past two decades. The percentage of these in the total school population has remained comparatively low according to John W. Jones,[5] U. S. Department of Health, Education and Welfare. Reliable figures on the actual number of visually handicapped children in the school population are not available. Depending upon definition and the authority quoted they may vary from as high as one out of four, or four out of ten, or in terms of percentage from thirty-six to forty-six per cent.

The most common estimate of the incidence of partially seeing children is that given by the National Society for the Prevention of Blindness, i.e., one child out of every 500 of school age enrollment. "Estimates projected beyond 1970 indicate the total number of visually handicapped children may be considerably higher than at present but that the prevalence of those considered by the schools as educationally blind may drop to about one in every 7,000 to 8,000 school age children."[5]

These estimates are affected by a surge in the incidence of blindness in infants and the shift in educational emphasis from sight conservation to sight utilization. Incidence of partial sightedness cannot be studied realistically without mentioning a very large contributing eye condition, namely, retrolental fibroplasia. In 1942 this eye condition began to increase. When the causative agent was located in 1955 and identified as the administration of a high concentration of oxygen to these infants, retrolental fibroplasia all but disappeared. However, thousands had been added to the number of visually handicapped children. In this same approximate period a distinct increase in birth rate added sharply to the number of children with visual limitations and blindness due to causes other than retrolental fibroplasia. In the years 1959 to 1962 these helped to add to a wave of visually handicapped children entering school. This wave which peaked in the third grade in 1962 should be in the sixth grade at the present time (1965).

As the general child population continues to rise it is to be expected that the number of visually handicapped children will rise also. However, two factors may decrease the number classified as blind in years to come. Those blinded by retro-

lental fibroplasia will not be replaced by others so affected. Also, with increased emphasis on sight utilization rather than on sight conservation, the percentage of those with visual limitations who are classified as blind will be lowered. Other children may become reasonably efficient readers of print due to optical reading aids. Children who would in the past have learned to read Braille now are learning to read print and are no longer classified for educational purposes as blind.

The incidence portion of the present study becomes of particular significance with the obvious widespread disagreement of authorities on the actual incidence of partially seeing children.

Identification

The most commonly used criteria for identifying partially seeing children for educational purposes is based upon visual acuity as determined by the Snellen Chart, namely ". . . . . corrected vision in the better eye of 20/70 or less".[10] Failure to read the Snellen Chart has long remained the standard criteria for referral. Many authorities feel that by itself the Snellen is at best a rough estimate and even passing it is no assurance that a child does not have a defect of vision enough to require treatment. Foote and Crane[6] suggest that "The only way to find every child who needs visual care is to arrange for a thorough and competent eye examination. This is especially true if a child exhibits any symptoms of visual problems.

If we consider case findings in a larger sense the problem is broader than mere identification of handicaps. It involves the recognition of a potential eye disability and being alert to needs of children with known handicaps. The American Public Health Association[3] states that "Observation of the child as he attempts to see near and distant objects is important regardless of the degree of his visual acuity. Often children with 'normal' 20/20 vision have an eye defect which can be suspected on the basis of observation alone."

Teacher observation and referral can be a very important factor in identifying the visually handicapped child. A study by Crane shows that the near vision test refers almost as many pupils as the Snellen although this test gives more incorrect referrals than Snellen. When combined with Snellen and teacher judgment "about three-fourths of the pupils referred

need care but the number of incorrect referrals exceeds the correct referrals."[18]

Finally, it may be said that the decision as to which test or combination of tests should be used in a community should be determined by the consensus of an advisory committee. Such a committee might include school and health personnel, ophthalmologist and optometrist, and others concerned with the visually handicapped.

In the present study the screening procedure that gave the highest percentage of correct referrals regardless of over-referrals was desired so that the Snellen test plus teacher judgment was selected.

Team Approach in Present Study

The desirability of the team approach was recognized in the present study. The State Departments who assumed the initiative in planning this study were aware that children can reap benefits when parents, schools and vision specialists work together toward a common goal, identifying the visual problem and providing the services needed to insure the child's success. This study involved such a team: the school nurses and psychologists, ophthalmologists and optometrists, pediatricians, neurologist, the parents, and personnel from the State Departments represented.

Changing Educational Philosophy

A closer view must be taken of the change in educational concepts which permits a radical change in the educational setting and procedures for partially seeing children. It may be safely stated that this is an era of examination and experimentation with the many implications of new ideas in this field of special education.

a. Sight Utilization vs. Sight Conservation

One of the most important of these new concepts is the replacement of the idea of sight conservation with sight utilization, and the use of print whenever possible as an educational tool for many children with severe limitations. For years doctors and educators felt it was potentially damaging for partially seeing children to use their eyes, and such children therefore, should be encouraged and aided to conserve their

vision. This idea was replaced by a newer educational philosophy which may be summarized as follows: Special Education of visually handicapped children entered a new era when it became apparent that use of vision rarely results in damage. Sight *utilization* rather than conservation came to be stressed. It was realized that under proper conditions children learn to make good use of even slight amounts of residual vision. It became evident that some children formerly placed in separate classes to "save their eyes" not only *could* but *should* be returned to regular classrooms for all or part of their education.[8]

Other new ideas adopted concomitantly were:

1. Reading in poor light does not cause harmful organic changes.
2. A partially seeing or even normally sighted person will read better with practice, and can learn to read smaller and smaller print.[9]

Use of Print as Channel of Communication

The partially seeing group can now include children once considered legally blind. If their vision permits education through the channel of print, their adjustment in a seeing world may be eased considerably, and they make better social, educational and vocational adjustments.

This educational re-classification permits those identified as legally blind (20/200 or less) who can use their sight even to a limited degree in getting about, or who have form, movement or light perception, to make maximum use of the vision which remains. Jones[5] has indicated that these children can be taught to use light perception in orientation and independent travel. Form perception helps in distinguishing movement and colors. A careful analysis of colors, lighting and contrasts may even help to broaden and improve the child's range of visual perceptions.

Importance of Low-Vision Aids

The present shift of emphasis in school programs from sight conservation to sight utilization has, in the opinion of many authorities, stressed the fact that "many children with

very low visual acuity no longer need be expected to rely solely upon Braille or large-print books for their reading."[8] Some are enabled to read ordinary print when trained even though they must hold it close, using magnifiers and special lenses. Exact refraction and stronger ordinary lenses have been helpful too. Fonda's[9] study of 200 persons with low vision shows that "a substantial number can be partially rehabilitated with sub-normal vision aids."

Dr. Lebensohn, ophthalmologist at Northwestern University Medical School states "Most students with normal intelligence and motivation who have sufficient vision to walk about unaided, that is, 4/200 and a fair peripheral field, can be fitted with an optical aid with which they can read."[10]

Importance of Near Vision

Changing educational concepts have focused more attention on near vision. In general "the near visual acuity corresponds to that for remote vision; but it is greater in myopia, less in hypermetropia and presbyopia."[10] Therefore, separate tests are usually given for near and distant vision.

A study by Getman[4] seems to indicate that far vision is inversely related to school performance, i.e., the majority of children who have 20/20 vision are not the good achievers in school. Those who fail the 20/20 line are usually the upper one-fourth of their class scholastically. This apparent contradiction—poor vision, good student—or—good vision, poor student seems to suggest that near vision is of more educational importance than distance vision. Studies of the rules and laws of vision in 1950 are based on the child in the learning years from birth to the age of ten rather than on adults, and indicate that vision can be learned. Visual care becomes "much more than the prevention of disease by medicine and treatments—it is the assurance of reaching the highest possible potentials of scholastic, social and occupational performance in a world that demands more of eyes and vision than ever before in the history of man."[8]

Special Class vs. Regular Class Placement

According to Sloane[7] and other authorities, the present educational philosophy no longer segregates the child with less

than normal vision, nor treats him as an eye cripple. If eye usage increases efficiency, it is unnecessary to try to "save eyes."

The present trend is away from special class placement. The child with poor vision is being integrated more and more into regular classes, supported when necessary with visual aids and special materials. Often the use of an optical aid may mean the difference between success and failure for the child in regular class placement.

Though a child's near visual acuity and use of residual vision are very important in determining regular class as opposed to special class placement, how a child functions is of prime importance. Many educators agree that each child's reaction to his own handicap is more important than the apparent severity of the handicap. Jones[8] found that individual children react differently to similar visual limitations.

The decision to place a child in a special program has come to be based essentially on the extent to which the child's visual impairment *handicaps him in school* rather than on the extent of his visual loss. Information about the amount of visual acuity as an indication of loss is still useful to educators, but it is used as a gross, general guideline for preliminary referral and *not* for placement.

An estimate of a student's efficiency in using residual vision for close work is a valuable starting point for educational planning. However, the student's motivation, general intelligence and adjustment to his handicap have a great deal to do with his capacity to use residual vision for academic work.[16] Sloan suggests that near vision alone determines whether a child should be placed in a regular grade. Borderline cases function best learning in both Braille and ink print.[9]

A publication of the National Society for the Prevention of Blindness states that: A vision problem which is a serious educational impediment to one individual may not affect another to the same extent; the same type or degree of acuity and/or difficulty may have a different effect on different individuals. A deformed eye or reduced vision may also produce different emotional and social problems. Family, school and community attitudes considerably affect a child's total adjustment and his feelings about himself.[10]

Visual acuity alone is not the sole basis for educational classification and placement. It must be supplemented with psychological and physical information and an evaluation of the child's ability to adjust to a handicap and compensate for it.[17]

This line of thinking is further substantiated by Betts[11] when he states that "many individuals can compensate for certain handicaps as long as their general psychological and physiological status remains fairly normal.

In Sloan's opinion,[9] many children with very poor vision learn to read as quickly as those with better sight. They often are in the upper third of their classes. Such achievement causes educators to question the relationship between vision and achievement.

The American Optometric Association suggests that one of the most important factors in predicting a child's classroom adjustment is his ability to sustain near point vision. "Because most school tasks are performed within arm's length it is not enough to determine whether the child can read the Snellen chart at 20 feet or to prescribe corrective lenses to bring them up to that ability."[12] Some children's eyes may accommodate for the brief period necessary to pass the Snellen chart, but not for longer periods. It is necessary to determine how well the child can meet the demands of sustained near point vision performance. This skill, if lacking, may be learned through visual re-education. Betts[11] feels that "One of the chief responsibilities of the vision specialist is to 'prepare' an individual for sustained seeing activities."

Children with a weakness in the area of vision skills may require individualized instruction in reading, with emphasis upon utilizing context cues, recognition of words from their general shape and form, and training in working from large to small print. For some children, a combination of tactual, visual and auditory means may be helpful. Jones[8] has indicated that "The employment of a variety of remedial techniques in the teaching of basic learning skills is a practice commonly used with young visually handicapped children and with those recently included in special programs."[8]

"Those children who appear to be adjusting well and progressing up to or near their level of ability are usually

placed or remain in regular classrooms on a trial basis without special services."[5]

Regular Class Placement

Special materials, curriculum adjustments and procedures may be needed to help the partially seeing child use the vision he has to best advantage in the regular classroom. According to a publication of the American Public Health Association, Inc.[3] these aids may include all or some of the following:

—suitable location, lighting and physical equipment of classroom

—special educational materials and media . . .

—flexibility in daily schedules and classroom procedures

—modifications in instructional methods

—a specially trained teacher . . . . . .

Teachers Trained to Function in a Variety of Roles

Though specially trained teachers are of great importance, many regular class teachers today are trained to use project methods, experience charts, large illustrations and demonstrations, which ease seeing tasks and reduce near-point seeing load. Much of what is good classroom atmosphere for the partially seeing has been adopted already as valuable for all children. This includes proper lighting and seating, suitable communication skills, such as typing, writing in large print, proper spacing and neatness in organizing materials, avoidance of glare, use of kinesthetic approach, emphasis upon listening, eye health and safety habits.[11]

The American Public Health Association, Inc. and the National Society for the Prevention of Blindness agree that "The goals of education for children with impaired vision are basically the same as those for all other children . . . .

These children will be expected to meet the same minimum standards of achievement as normally seeing children."[3] If necessary, itinerant educational help may make the attainment of these standards more realistic and reduce regular class placement problems.

It is to be expected that teacher backgrounds and experience areas will become even broader in the future. Bowers[2] feels that the professional standards movement will improve the quality of the teaching profession. Teachers will become more capable of functioning well in a variety of educational settings. They will learn to function not only as teachers, but as counselors and administrators in the field of public relations. As they are trained to adjust to a variety of educational roles, it may be assumed that they will be better able to deal with all types of children, whether so-called normal or exceptional.

What the School Should Know About A Child

It is possible that a child's learning problems may be due to a variety of causes, or that he may in effect be multi-handicapped. If the child's learning problem is due to low ability or additional physical disabilities, Jones suggests that it may be desirable to place the child in a program staffed with personnel specially prepared to instruct this type of children. The services of several specialists may be required if the child has more than one type of handicap. In case the child's vision and school problems are not directly related, the child may profit more from the general school program from which he has been removed than from unnecessary specialized instruction.

Placement probably is affected most by the following five factors:

1. Child's eye condition
2. School and developmental history
3. Scholastic aptitude
4. General health
5. Relationship of school problem to visual disturbance.

To quote a publication of the U. S. Department of Health, Education and Welfare:

> At the time of placement, study is generally directed first to the nature and extent of each child's eye condition, his academic progress, developmental history and scholastic aptitude. Those who are found to be experiencing difficulty in school and who are progressing at a rate below what

might reasonably be expected of children with comparable ability, undergo further study. The possibility that other physical disabilities may be contributing to the school problem is explored. At this point referral also may be made to teachers or supervisors experienced in the education of visually handicapped children. They carefully appraise each child's visual performance and school problems to see if a causal relationship appears to exist.[5]

Evaluation of Effectiveness of Individual Intelligence Tests for Blind and Partially Seeing

In testing the child's academic progress, the U. S. Department of Health, Education and Welfare suggests that "it is often helpful to compare results obtained from several regular and large print group tests, those which have been administered orally, individually, and those given with time limits extended."[5]

While it may be of doubtful validity to compare the performance of a visually handicapped child on an oral or Braille achievement test with the performance of normally seeing students on the same test, Jones has indicated that such results give the most accurate basis for comparison of acquired content material. However, all other factors being equal "the visually handicapped pupil taking the test orally or with extended time limits, should be expected to score slightly higher than his seeing counterpart through grade 6. Above grade 6, the differences in mode of administration appear to be of negligible significance."[5]

In regard to individual intelligence tests which for the most part have been designed and standardized for children with average sight, the same author feels that such tests are invaluable in giving an accurate estimate of the child's capabilities for comparison with his school achievement. However, they must be given by qualified examiners experienced in working with children who have visual limitations. Such examiners can make clinical judgments as to the probable effect of each child's visual limitations on the test score. These examiners will also be able to interpret the test findings with the proper caution.[5]

In recognizing the need for precise psychological measurements, the present study employed a competent school psychologist able to carefully test and thoroughly evaluate the results of the psychological tests given.

PART III

PROCEDURES FOR THE COLUMBUS, OHIO STUDY

Why Columbus, Ohio?

Columbus has a population of 541,519 according to United States census and Columbus area Chamber of Commerce. In 1964 there were 102,193 children enrolled in kindergarten through twelve in the Columbus Public Schools. Columbus appeared to be a most suitable city for several reasons. Special Education classes and services are well developed with day school programs for deaf, hard of hearing, blind, partially seeing, orthopedically handicapped, neurologically handicapped, emotionally handicapped and educable retarded (slow learning—I. Q. 50-75). Other services include school psychology and speech and hearing therapy. The cooperation and cordial relationship between the Ohio Department of Education and the Columbus Board of Education also was a significant factor in choosing Columbus.

While Columbus appears to be a typical site for such a study there are also factors that appear to make it rather atypical. At present the city has one of the largest geographical school districts in the United States. Because it provides a comprehensive special education program many outside demands are made from bordering communities for service. Population within the program has become somewhat skewed in that parents of children with exceptionalities have tended to migrate to the community for appropriate programs. However, it was felt that Columbus appeared to be an ideal selection and a place where findings should be realistic and representative of national incidence and needs.

The Problem

In the last decade, the number of organized programs for partially seeing children in Ohio has witnessed a steady decline. Present program standards may need revision but until this time there have been no studies to suggest appropriate changes. To insure adequate educational planning for children

with visual handicaps in the future it was felt that the following problem areas should be investigated:

1. To study the incidence of children falling into the definition of partially seeing.
2. To determine whether all of the children under the present definition of partially seeing need special class programs.
3. To study the apparent increase in multi-handicapped children and to attempt to evaluate the effect of mental retardation, neurological handicaps, or other exceptionalities in relation to visual functioning.
4. To determine the need for changes in definition and programming for partially seeing children.

This problem was studied through a co-operative effort between the Columbus Board of Education, the Division of Special Education, Ohio Department of Education, and the Division of Maternal and Child Health, Ohio Department of Health. Each of these groups had a specific area of concern. The Division of Special Education of the Ohio Department of Education was concerned with the incidence of partially seeing children and program standards. The Columbus Board of Education was interested in educational planning for this group of children. It wanted to know why some partially seeing children adjusted well in regular classes while others of like visual acuity required special class placement. Early in the year 1963, representatives from the Department of Education met with the Director of Special Education of the Columbus Public Schools to develop study plans. As a result the following program was developed and placed in operation:

1. Visual screening on all fourth, fifth and sixth grade children throughout the Columbus Public Schools.
2. Ophthalmological examinations for all children identified as partially seeing.
3. Optometric examinations for all children identified as partially seeing.
4. Medical examinations on all children identified as partially seeing which included:
   (a) A complete pediatric examination
   (b) A neurological and electroencephalographic examination

5. Individual psychological and achievement evaluations on all children identified as partially seeing.

Children identified as partially seeing in the study met one or both of the Ohio Department of Education's visual standards for partially seeing children. These are:

1. Visual acuity of 20/70 or less in the better eye after correction.
2. A correction of more than 10 diopters of myopia.

Nurses' Screening

The study co-ordinator worked with the supervisor of nurses and a school nurse in developing blanks to record the nurses' screening information. Attention was given to setting up efficient screening procedures. The recording blanks were tested in one or two school settings, and necessary revisions made. Workable copies were made by the Department of Health Services of the Columbus Public Schools and distributed to the nurses at a Staff Conference. The program was also explained at this time.

During the course of the study, the co-ordinator and personnel from the Ohio Department of Education and the Department of Special Education of the Columbus Public Schools developed or duplicated many recording forms for use in the research project. Examples can be found in appendix B.

The school nurses screened each child using the Snellen procedures followed in Columbus according to policy recommended by the Ohio Department of Health. All children who failed the 20/70 level of the Snellen chart were re-tested. Children failing the second screening were given a muscle balance test and then referred for further study. A total of 23,611 children were examined and 214 referred for follow by the other specialists. *Table 1* illustrates the actual breakdown of children by grade level.

TABLE 1

A Description by Grade Level of The Children Screened by School Health Nurses in The 1964-65 Columbus, Ohio Study

Nurses Screened:	
4th graders	8,208
5th graders	7,820
6th graders	7,045
Educationally Retarded (4-5-6 grade equivalent)	511
Partially Seeing Class 4-6	21
Partially Seeing Slow Learning Class	6
Total Number Screened	23,611
Number of Partially Seeing Children Referred by Nurses for Examination	214
Per cent of Total Population Referred by Screening Procedure	9%

Methods of communication between the project co-ordinator and nurses included (1) attendance at Nurses' Staff Meetings, (2) communication forms (3) telephone calls, (4) letters and conferences with the supervisor of nurses and the school physician.

When the desired screening information had been processed by the study co-ordinator, the screening forms were filed for future reference.

At the same time a medical release form was developed to show parental permission for further examination of the 214 children suspected of being partially seeing. Considerable effort was expended by the school health nurses and co-ordinator to insure this cooperation. As a result permission was obtained from the parents of 168 of the 214 children identified. In 26 cases while parents were not willing to allow their child's participation they did agree to make the child's visual report available for study purposes. Table 2 summarizes the information.

TABLE 2

Number of Children Referred by School Health Nurses for Further Examination in Columbus, Ohio Study 1964-65

A. Number subject to intensive ophthomological and optometric examinations	168
B. Number of children not available to study by clinic visual team, but whose vision was verified by outside medical sources	26
Total number accounted for medically	194
C. Number unaccounted for	20*

* 4 moved
1 deceased
15 would not participate

Scheduling of Medical and Physical Examinations

A testing schedule was set up for the 168 children suspected of being partially seeing. They were transferred by taxi from their own school to the Ohio State School for the Blind for ophthalmological and optometric examinations. This procedure involved the mailing of an explanatory letter and scheduling appointment form to parents. At the same time an explanatory letter and a copy of the child's scheduling appointment was sent to the child's school principal. Four copies of pupil's names, addresses, etc. were prepared for use of the testing personnel, and to facilitate taxi transportation. One sheet served as a permanent record to check taxi transportation charges. Transportation arrangements were made by telephone with the cab company which provides transportation for special class children in the Columbus Public Schools.

After each eye examination was completed, a master copy of the test data was prepared to assist in avoiding duplication in future scheduling and to serve as a permanent record. Eventually, an individual data folder was prepared for each child selected for intensive study. Two copies of individual filing cards were kept on the 214 children contacted. These helped to facilitate scheduling and were used for cross references.

Medical, Physical and Psychological Examinations

When ophthalmological and optometric examinations were completed it was found that 36 children met the pre-selected criteria for partially seeing, and were therefore included for pediatric, neurological, electroencephalographic and psychological examinations. This sample consisted of nine children from regular classes, twenty-one from classes for the partially seeing, and six from classes for slow learning visually handicapped. These children received pediatric and neurological examinations at the Ohio State School for the Blind. Their electroencephalogram was of necessity scheduled in the neurologist's office since testing equipment would not have been been available elsewhere.

Psychological evaluations including the Hayes-Binet, Stanford-Binet, L. M., and the Wide Range Achievement tests were given individually at the Columbus Board of Education or at the child's school.

Table 3 illustrates the number of children confirmed as partially seeing by the ophthalmologist and optometrist. It should be explained that in every instance children with borderline visual acuity were included.

TABLE 3

Number of children Confirmed Partially Seeing by The Ophthalmologist and Optometrist in The Columbus, Ohio Study 1964-65

	Partially Seeing Classes	Regular Classes
4th grade	8	5
5th grade	6	2
6th grade	7	2
Slow Learning Class	6	0
Total number identified by study — 36		

The total sample of 36 out of the 23,611 children would appear to be in line with the national incidence of 1 in 500 and with present State Board of Education Standards 20/70 criteria or a correction of more than 10 diopters of myopia.

Table 4 presents a list of diagnostic findings on the children studied intensively by the complete clinic team.

A comparison of national and Columbus, Ohio findings would suggest that incidence is between .15% to .2% of the population.

TABLE 4

Listing of Diagnostic Findings on the Students Studied Intensively in the Columbus Public Schools Study 1964-65

Findings:	No.
Medical diagnosis of a minimal neurological handicap	16
Emotional problems thought to be significant by the clinical team	5
R L F	1
Primary myopic condition which could not be corrected to better than 20/70	4
Primary myopic condition which could be corrected to better than 20/70	3
Epilepsy—petit mal (included under neurological)	1
Microcephally	1
Albinism	3
Marfan's Syndrome	2
Abnormally slow physical development	4
Educable mentally retarded	12 (Stanford Binet) 10 (Hayes Binet)

Table 5 depicts the Columbus, Ohio sample as it relates the national and state percentages under present standards.

TABLE 5

A Percentage Distribution of Partially Seeing Children by Diagnostic Classification As It Relates to the Columbus, Ohio Study

	1952 National Study of Partially Seeing Children (7000)	1950 Ohio Partially Seeing Program (950)	1964 Ohio Partially Seeing Program (602)	1964-65 Columbus Study (56)
1. Refractive errors (Myopia, Hyperopia, Astigmatism)	49%	51%	45%	17%
2. Developmental anomalies of structure (cataracts, Albinism, RL, Marfan's)	22%	27%	39%	50%
3. Defects of Muscle Function (Strabismus, Nystagmus)	18%	13%	12%	28%
4. Other Diseases or Defects (general diseases, trauma, infectious tumor)	11%	9%	4%	5%

* Report on Visual Handicaps of Partially Seeing Children. Exceptional Children 18:137-142, February 1952

The above chart compares the primary causes of visual handicaps of 7000 Partially Seeing Children in the United States with 950 children in the Ohio program in 1950 and 602 children in 1964.

It may be observed that the overall Ohio program has had a decreasing proportion of cases in the categories of defective muscles and diseases and an increasing proportion of developmental anomalies.*

In the three prior surveys refractive errors' was significantly the largest category. Yet one might have predicted on the basis of scientific advances in refractive correction and vision aids this group would be a great deal smaller, even in light of medical advances made in the other areas and the total increase in population.

TABLE 6

Distribution Of Visual Acuity Found In The 1964-65 Columbus, Ohio Partially Seeing Study

Acuity Range	Number
Better than 20/70	2
20/70 to 20/100	12
20/100 to 20/200 or less	22
Total	36

There has been considerable discussion over the years regarding the inclusion of myopic children in special education programs for partially seeing. The ophtholomologists and optometrists associated with the Columbus study however, did not feel that the present 10 diopters of myopia provision for placement was a valid referral criteria and suggest that it should be eliminated from State Board of Education Standards when they are revised. Table 7 compares the 1950, 1964 and Columbus study and vividly illustrates a reduction in enrollment if this clause is eliminated.

TABLE 7

A COMPARISON OF DIAGNOSTIC FINDINGS UNDER PRESENT STANDARDS AND CLASSIFICATION BASED SOLELY UPON VISUAL ACUITY

1964-65 COLUMBUS, OHIO INTENSIVE STUDY

	Present State Board of Education Standards	Number of Children	Classification only on basis of 20/70 or less in better eye	Number of Children
1. Refractive errors	17%	6	12%	4
2. Developmental anomalies of structure	50%	18	53%	18
3. Defects of Muscle Function	28%	10	29%	10
4. Other Diseases or Defects	5%	2	6%	2
		36		34

1964 OHIO PROGRAM SURVEY

	Present State Board of Education Standards	Number of Children	Classification only on basis of 20/70 or less in better eye	Number of Children
1. Refractive errors	45%	272	27%	119
2. Developmental anomalies of structure	39%	235	51%	221
3. Defects of Muscle Function	12%	69	16%	68
4. Other Diseases or Defects	4%	26	6%	24
		602		432

1950 OHIO PROGRAM SURVEY

	Present State Board of Education Standards	Number of Children	Classification only on basis of 20/70 or less in better eye	Number of Children
1. Refractive errors	51%	486	30%	126
2. Developmental anomalies of structure	27%	255	42%	173
3. Defects of Muscle Function	13%	128	15%	62
4. Other Diseases or Defects	9%	81	6%	54
		950		415

MEAN AVERAGE MENTAL ABILITY IN THE 1964-65 COLUMBUS, OHIO PARTIALLY SEEING STUDY

33 of the original 36 partially seeing children were available for further intensive educational and psychological study.

Each child was given a Hayes-Binet Intelligence Test and a Standford-Binet Intelligence Test. The following table depicts the mental ability of the study group.

Group I includes the children enrolled in the special classes for partially seeing, including the slow learning partially seeing.

Group II includes children identified as partially seeing who are enrolled in regular classes with no special services.

TABLE 8

MEAN AVERAGE MENTAL ABILITY

		Hayes-Binet Mean Avg. I.Q.	Stanford-Binet Mean Avg. I.Q.	Range
I. Special Classes	N 27	88.2	85.6	48-127
II. Regular Classes	N 6	100.3	94.4	68-126
III. Total Sample	N 33	90.4	87.2	48-127

TABLE 9

I. Q. DISTRIBUTION OF CHILDREN 1964-65 COLUMBUS, OHIO PARTIALLY SEEING STUDY

Hayes-Binet Intelligence Scale

	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	Total
Regular Class				1	2		1		2	6
Partially Seeing Class		1	4	4	7	3	4	2	2	27
Total		1	4	5	9	3	5	2	4	33

Stanford-Binet Intelligence Scale (LM)

	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	Total
Regular Class			1	1	1		1		2	6
Partially Seeing Class	1	1	4	4	8	2	4	1	2	27
Total	1	1	5	5	9	2	5	1	4	33

Each child was also given a reading and arithmetic subtest of the Wide Range Achievement Test. Tables 10 and 11 provide a comparison of mental ages obtained by the school psychologist and achievement in these two areas. It is interesting to note that there was generally little discrepancy between Stanford Binet mental age and the Hayes Binet mental age. Grade level expectancy was somewhat below average but reflected continuous academic growth on the Columbus sample. Appendix D presents a complete breakdown on all the findings for the children included in the study.

TABLE 10

A COMPARISON OF WIAS RANGE ARITHMETIC ACHIEVEMENT AND MENTAL ABILITY IN THE 196445 COLUMBUS, OHIO PARTIALLY SEEING STUDY

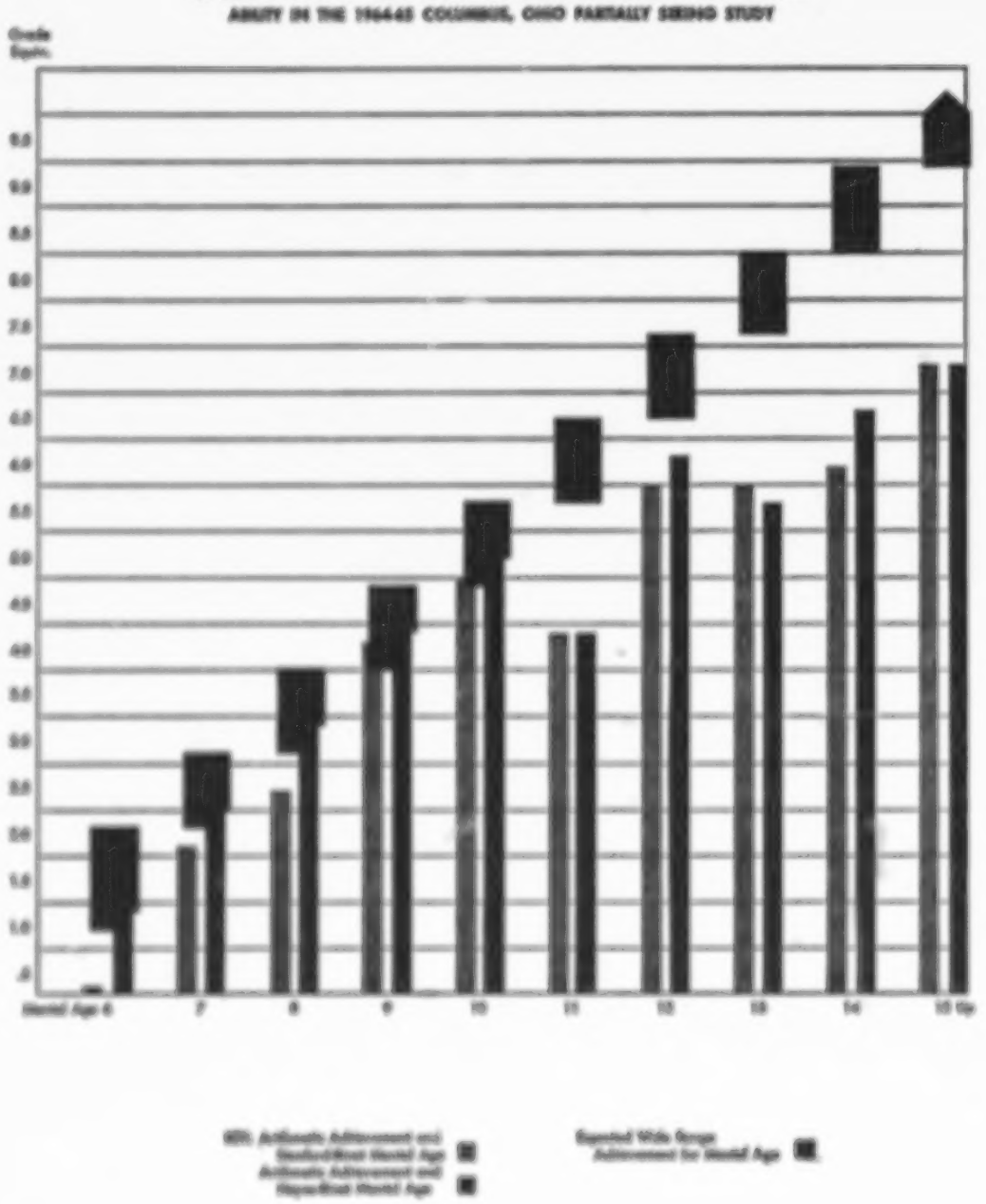
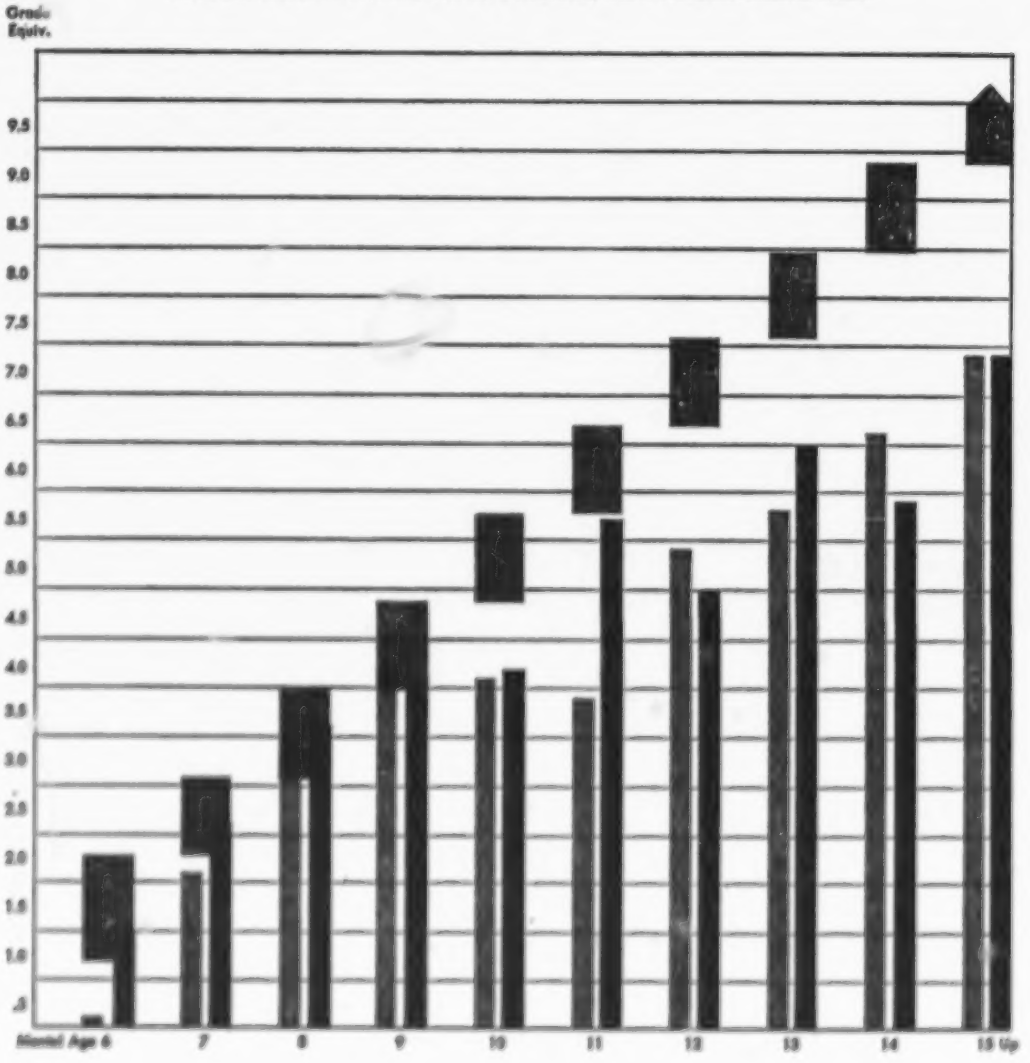


TABLE 11

A COMPARISON OF WIDE RANGE WORD RECOGNITION ACHIEVEMENT
AND MENTAL ABILITY IN THE 1964-65 COLUMBUS, OHIO PARTIALLY SEEING STUDY



Teacher Observation Questionnaire

Information was also gathered through the use of a teacher observation sheet.* These were designed to obtain teacher judgment of:

1. The child's academic functioning
2. The child's visual functioning
3. The child's inter-personal relationship

Classroom teachers were asked to complete the information on all children receiving ophthamological and optometric examinations. They were also requested to complete the forms for other children with normal vision and similar I.Q.'s for matching purposes.

As previously described the teacher observation questionnaire was developed as a means of preparing the teachers' views of students in special classes for partially seeing children, regular class partially seeing, students whose vision was corrected to better than 20/70 and a group of so-called normal children from regular classes.

Originally, it was planned to statistically treat the results with a Chi Square technique. However, the small frequencies, particularly in the regular class partially seeing group, prevented this treatment even with the use of Yates Correction. Other means of statistical treatment were thoroughly investigated but proved entirely unreliable and unsatisfactory. Subjective evaluation would suggest, however, that there was no statistical difference in the four groups as reported by the teachers. The questionnaire and raw data is simply presented for consideration in Appendix C.

* See Appendix C

PART IV

Conclusions and Recommendations

Conclusions

1. Incidence

a. Results obtained from the Columbus, Ohio study would appear to suggest an incidence figure between .15% and .2% which compares with national findings when using the 20/70 criteria and 10 or more diopters of myopia.

b. Results based solely upon the 20/70 criteria or less would suggest an incidence figure of .13% of the population in the Columbus sample.

c. In considering the relatively small segment of the population involved (36 in 23,611) it was difficult to arrive at definitive conclusions. It was felt however, that findings in Columbus were realistic and representative of other Ohio communities.

d. In view of the population and the associated multi-handicaps involved the importance of registering visually handicapped children with the State Division of Special Education appears even more important so that adequate services and program can be provided when needed.

2. Diagnostic Findings

a. It would appear that many children with visual problems, at least in the Columbus, Ohio sample, have other difficulties, i.e., they are neurologically handicapped, emotionally handicapped and mentally retarded.

b. The need for a team approach including both educational and medical evaluation seems to be extremely important with visually handicapped children.

c. The children placed in special classes for partially seeing generally had low vision with 22 having 20/100 to 20/200 or less visual acuity.

d. It would appear that Columbus is using its special class program for children with developmental anomalies, defects of muscle function and other diseases or defects

rather than refractive errors, particularly myopia. This is dramatically illustrated by the fact that only 17% of the children in the Columbus study had refractive errors compared to 45% in the total Ohio program in 1964 and 49% in the 1950 national study.

e. Mean average ability on the total Columbus sample would suggest that the group is low average (90.4 Hayes Binet, 87.2 Stanford Binet L.M.) with a range of 48 to 127 I.Q.

f. Findings on achievement as measured by the Wide Range Achievement Test suggested that while mean achievement was somewhat below grade level expectancy, results reflected continuous academic growth.

g. It would appear that measured mental ability on the Hayes Binet and the Stanford Binet L.M. generally had similar value in predicting achievement.

3. Implications for Future Study

a. In view of the apparent number of multi-handicapped children enrolled in all areas of special education, there is a need for extensive study in instructional methods and specifically what these children need, who can profit and what constitutes a realistic educational program for many of them.

b. It would be helpful if this type study could be replicated in another area of the state, particularly in a rural community. A similar study conducted outside of Ohio should also provide additional insight into the needs of visually handicapped children.

Recommendations

1. Incidence

a. In line with modern philosophy in considering the relatively small segment of the population of visually handicapped children, it is recommended that Ohio develop a program for visually handicapped children which combines both large type and braille students and that State Board of Education Standards be revised accordingly. This would appear to be compatible with national trends

and would seem to be a satisfactory solution to enable smaller communities to offer an effective and appropriate program for children with visual handicaps.

b. In view of scientific advances made in the correction of vision and the general reaction to the" diopters of myopia criteria as a referral to special class for partially seeing by both professional educators and medical personnel, it is recommended that State Board of Education Standards be revised to eliminate this clause as a sole factor in eligibility for placement.

c. It is strongly recommended that emphasis be placed on the early identification and the registration of visually handicapped children with the Division of Special Education.

2. Diagnostic Findings

a. In view of the many children identified in the Columbus, Ohio study with multi-handicaps and/or learning and behavioral difficulties, it is recommended that emphasis be placed on more self-contained experiences in the special class and that future program development include provision for a continuous educational program for visually handicapped children, elementary through senior high school. It is further recommended that State Board of Education Standards be revised accordingly.

b. It is recommended that sustained effort be placed on the importance of a team approach in working with visually handicapped children and that emphasis be placed on continued cooperation and communication between educators, physicians and eye specialists.

3. Implications for Future Study

a. It is recommended that future studies of visually handicapped children emphasize the areas of instructional methodology and the needs of these children.

b. It is recommended that consideration be given to completing a similar study of visually handicapped children in a rural community within the state of Ohio. A study should also be conducted in another city comparable to Columbus outside of Ohio.

REFERENCES

1. Eakin, Wm.; Pratt, Robt.; McFarland, Thomas L.
   Type Size Research for the Partially Seeing Child. Pittsburgh: Stanwix House, Inc., 1961. Monograph.

2. Bowers, Robt. A.
   "Some Considerations for Future Teacher Preparation", *The New Outlook for the Blind, LVII* (December, 1963)

3. American Public Health Association.
   Services for Children with Vision and Eye Problems.

4. Hathaway, Winifred.
   The Education and Health of the Partially Seeing Child. New York: Columbia University Press, 1959.

5. Jones, John W.
   The Visually Handicapped Child at Home and School. Washington: U. S. Department of Health, Education and Welfare, 1963. Bulletin 1963, No. 39.

6. Foote, Franklin M.; Crane, Marian M.
   An Evaluation of Vision Screening. Reprinted from Exceptional Children, Vol. 20, No. 4, Jan., 1954, pp. 153-161, 180, Distributed by National Society for the Prevention of Blindness. New York, Pub. No. 183.

7. Fonda, Gerald, M. D.
   Lenses for Subnormal Vision. Reprinted from The Sight-Saving Review, XXV. Copyright, 1955, by the National Society for the Prevention of Blindness, Inc.

8. Getman, G. N. O. D.
   What About Your Child's Vision? A Report Reprinted from Visual Digest Magazine, (Spring, 1950.)

9. Sloane, Albert E.
   "The Ophthalmologist's Need for Guidance from Educators of the Partially Seeing", *The New Outlook for the Blind, LVII.* (June, 1963)

10. National Society for the Prevention of Blindness. *Helping the Partially Seeing Child in the Regular Classroom,* Reprinted from The Sight-Saving Review, XXXI No. 3 Copyright, National Society for the Prevention of Blindness, Inc., 1961.

11. Betts, Emmett A.
    Visual Readiness for Reading, A chaper reprinted by permission of the author and publisher, from Foundations of Reading Instruction, by Emmett Albert Betts, American Book Company, 1946, American Optometric Association. St. Louis.

12. American Optometric Association.
    Do You Know These Facts About Vision and School Achievement? Prepared by the American Optometric Association, St. Louis, 1960.

13. *Vision Screening in Schools*
Reprinted from the Sight-Saving Review, XXXI, No. 1, Spring, 1961, Copyright, 1961, by the National Society for the Prevention of Blindness, Inc., New York.

14. Robertson, Clara M.
"Services to Children Reported by Optical Aids Clinics," *The International Journal for the Education of the Blind, XIII* (December, 1963)

15. Lebensohn, James E.
Scientific and Practical Considerations Involved in the Near-Vision Chart. From the Department of Ophthalmology, Northwestern University Medical School. Read at the American Academy of Ophthalmology and Otolaryngology, in Cincinnati, September 17, 1956.

16. Root, Verne E.
"The Educator's Need for Ophthalmological Guidance", *The Sight-Saving Review, XXXIII* (Summer, 1963)

17. Mackie, Romaine.
Education of Visually Handicapped Children. Bulletin 1961, No. 30, United States Government Printing Office, Washington, 1961.

18. Crane, Marion M.; Scobee, Richard G.; Fonte, Franklin M.; Green, Earl L.
Study of Procedures Used for Screening Elementary School Children for Visual Defects. National Society for the Prevention of Blindness No. 181, Reprinted from The Sight-Saving Review, Vol. XXII, No. 3 Copyright, 1952, by the National Society for the Prevention of Blindness, Inc., New York.

APPENDIX A

OHIO STATE BOARD OF EDUCATION
STANDARDS AND FORMS

for

VISUALLY HANDICAPPED CHILDREN

Ohio

State Board of Education

PROGRAM STANDARDS

for

Special Education Units

(Adopted 4/60, Revised 7/62)

5.0 Units for Blind Children

5.1 General

5.11 A special education unit or a fractional unit, for blind children, either resource room or itinerant teacher unit, may be approved only within these standards.

5.12 A special education unit or fractional unit may be approved for an experimental or research unit, designed to provide a new or different approach to educational techniques and/or methodology related to blind children.

5.13 All children enrolled in an approved special education unit for blind children shall meet the standards listed herein.

5.2 Eligibility

5.21 Children who have no vision.

5.22 Children whose eye condition is such that they cannot use vision as their chief channel of learning.

5.23 Blind children of school age with intelligence quotient of 70 or above.

5.3 Assignment

5.31 The placement of a pupil in a special program for blind and the transfer from the unit, is the responsibility of the superintendent of schools (district maintaining unit) or a staff member designated by him. This professional staff member shall be someone other than a teacher.

5.32 The person assigned the responsibility of placement of blind children shall keep records and the supportive physical and mental data used as a basis for eligibility for placement and transfer.

5.321 This person shall provide such records and data to the special education teacher.

5.322 This person shall provide such records and data to the school receiving the child when transfer is made to any other program.

5.33 Placement of a child in a special program for the blind shall be based on consideration of the physical, and the mental readiness of the child to benefit from instruction, and the annual eye report.

5.4 Unit Size

5.41 The minimum number for establishment of a resource room unit for blind children shall be five.

5.42 The minimum size for an itinerant teaching unit for blind children shall be determined by the needs of the district.

5.5 Housing

5.51 A special education unit for blind children may consist of a resource room in a public school building, or five or more blind children in regular classrooms, served by an itinerant program.

5.52 The classrooms where these children receive special instruction shall meet the standards for a regular classroom and provide the extra equipment and furnishings necessary for the instruction of blind children.

5.53 Rooms used for special instruction of blind children on the itinerant program shall be adequate to meet the needs of the child and the special teacher.

5.54 Storage space shall be adequate for the materials and equipment needed in the special classroom.

5.55 Storage space shall be arranged so that blind children can use it easily.

5.56 Adequate storage space shall be provided for the use of the itinerant teacher.

5.6 Program

5.61 Blind children in a Braille resource program in the public schools shall work as much as possible in the regular classrooms in the school, with children of their grade level, returning to the resource room for training in Braille skills.

5.62 Blind children on the itinerant program shall work in the regular classrooms except for periods of special instruction provided by the special teacher.

5.63 Program planning for all blind children in public school shall include time for:
5.631 Teaching of Braille skills.
5.632 Teaching of typing.
5.633 Travel training.

5.7 Equipment and Materials

5.71 Textbooks used in regular grades and corresponding Braille texts shall be provided for the use of the blind child.

5.72 Special equipment such as Braille slates, Braille writers, arithmetic boards, typewriters and Talking Books shall be provided.

5.8 Teacher Qualifications

5.81 A teacher shall meet all the requirements for certification as set by the State Board of Education for this area of specialization.

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3021 Alberta Street, Columbus 4, Ohio

ADMINISTRATIVE CRITERIA

APPROVAL OF TEACHERS IN SPECIAL EDUCATION UNITS FOR BLIND CHILDREN EFFECTIVE 1963-64

State Board of Education Program Standards—SE 5.0

A. Teachers currently in service will be approved if they:

1. Hold a standard teaching certificate which has been validated to teach blind children.
2. Hold a standard teaching certificate and submit evidence of intention to complete all certification requirements within a three-year period. Teachers so approved shall submit annual evidence of preparation status until the certification pattern is completed.
3. Hold a Life Certificate issued prior to September 5, 1935.

B. Teachers new to the program will be approved if they:

1. Hold the special certificate to teach blind children, as prescribed in Certification Standards adopted December 1961.
2. Submit evidence of the following:
   a. One year of teaching experience.
   b. Six semester hours of special preparation in the Education of Blind Children, as prescribed in Certification Standards adopted December 1961.
   c. Submit evidence of intention to complete all certification requirements within a three-year period. Teachers so approved shall submit annual evidence of preparation status until the certification pattern is completed.

C. Emergency Situations:

1. A teacher in service prior to September 1963 who meets with an emergency which prevents him or her from com-

pleting the certification requirements may have the time limits extended for one year.

2. In case of a vacancy, a teacher who holds a valid teaching certificate may be approved for the current school year.

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

2201 Alberta Street, Columbus 4, Ohio

CERTIFICATION LAWS AND REGULATIONS**

Teachers of Blind Children

A. An application for the provisional special certificate to teach blind children shall submit evidence of the following preparation:

(1) A provisional certificate at the level for which the special certificate is requested.

(2) Nine (9) months of teaching experience at the level for which the special certificate is requested.*

(3) Ten semester hours of special preparation in the following pattern:

(a) Anatomy, Physiology and Hygiene of the Eye	2 sem. hrs.
(b) Principles and Methods of Teaching Braille	4 sem. hrs.
(c) Theory and Practice in the Education of Blind Children	2 sem. hrs.
(d) Education of Multi-Handicapped Children	2 sem. hrs.

* May be waived upon the satisfactory completion of six additional semester hours of observation and student teaching with blind children.

** Adopted by State Board of Education December 11, 1961. Effective January 1, 1963.

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

ADMISSION PROCEDURES*

OHIO SCHOOL FOR THE BLIND

A. Admission

1. Procedures

a) All blind children will be referred to the Division of Special Education.

1) All referrals will be made by the school district of residency of the blind child.

2) The Division of Special Education will maintain a central file for all information concerning blind children.

b) All blind children referred will be seen by a staff clinic team for evaluation in the following areas:

1) Ophthalmological.

2) Psychological.

3) Educational.

4) Other special areas may be included when additional information is necessary to complete the evaluation.

c) The report on each child will be referred to the following committee:

1) Superintendent, Ohio School for the Blind or his designated representative.

2) Director, Division of Special Education.

3) One member will be designated by the Superintendent of Public Instruction.

d) The committee recommendations will be submitted to the Superintendent of Public Instruction for appropriate action.

* Adopted by the State Board of Education, 1960.

2. **Criteria for Admission—Children may be admitted to either a residential or a day school program at the Ohio School for the Blind:**

   a) If they have no vision or if the eye condition is such that vision cannot be used as the chief channel of learning.

   b) If their calendar age is 5 years by September 1 of the current school year.

   c) If they are capable of profiting substantially by instruction. This will be determined by the standards adopted by the State Board of Education under Section 3321.05 R.C.

   d) If they have sufficient physical and social maturity to adjust to the discipline of formal instruction and group living.

3. **Placement—Factors that will be considered in placement of children are:**

   a) Availability of a suitable local school program.

   b) Needs of individual children.

   c) Parental preference.

B. **Transfer and Dismissal**

1. **Procedures:**

   a) All children considered for either dismissal or transfer will be referred to the committee outlined in Section A-1 (c), who after study, for good and sufficient reason may recommend appropriate action.

STATE OF OHIO

DEPARTMENT OF EDUCATION

COLUMBUS 15

G. G. HOLY
SUPERINTENDENT OF
PUBLIC INSTRUCTION

S. J. BONHAM JR., DIRECTOR
DIVISION OF SPECIAL EDUCATION
3201 ALBERTA STREET
COLUMBUS 4, OHIO

To: All School Administrators

From: S. J. Bonham Jr., Director, Division of Special Education

Re: Referral of *Blind* Children for Educational Programming

In accordance with State Board of Education Standards the Division of Special Education and the Ohio State School for the Blind are providing evaluation clinics for blind children. Your cooperation is needed to aid in the identification of children needing such services. Please list below the names of any blind children in your district who do not attend either the public school classes or the Ohio State School for the Blind. This information should then be returned to the Division of Special Education, 3201 Alberta Street, Columbus, Ohio 43204— Attention of S. J. Bonham.

Name of Child *Date of Birth* *Parent's Name* *Address*

Reported by _____

Address _____

Date _____

Ohio

State Board of Education

PROGRAM STANDARDS

for

Special Education Units

(Adopted 4/60, Revised 7/62)

6.0 Units for Partially Seeing Children

6.1 General

6.11 A special education unit or a fractional unit, for partially seeing children, either resource room or itinerant teacher unit, may be approved only within these standards.

6.12 A special education unit or fractional unit may be approved for an experimental or research unit, designed to provide a new or different approach to educational techniques and/or methodology related to partially seeing children.

6.13 All children enrolled in an approved special education unit for partially seeing children shall meet the standards listed herein.

6.2 Eligibility

6.21 Children having visual acuity of 20/70 or less in the better eye after correction, or children who cannot read smaller than 18 point print at any distance.

6.22 Children with 10 or more diopters of myopia who are referred by the examiner.

6.23 Partially seeing children of school age with intelligence quotient of 70 or above.

6.3 Assignment

6.31 The placement of children in special education units for partially seeing, and transfer from the program shall be the responsibility of the superintendent of schools (district maintaining unit) or a staff member desig-

nated by him. This professional staff member shall be someone other than a teacher.

6.32 The person assigned the responsibility for placement of partially seeing children shall keep records and the supportive physical and mental data used as a basis for eligibility for placement and for transfer.

6.321 This person shall provide records and data to the special education teacher.

6.322 This person shall provide such records and data to a school receiving the child when transfer is made to another program.

6.4 Unit Size

6.41 The minimum number for the establishment of a resource room for partially seeing shall be ten.

6.42 The minimum number for an itinerant teaching unit for partially seeing shall be determined by the needs of the district.

6.5 Housing

6.51 The classroom where these children receive special instruction shall meet the standards for a regular classroom and shall include the extra equipment and furnishing necessary for the instruction of partially seeing children.

6.52 Rooms used for special instruction of partially seeing children on the itinerant program shall be adequate to meet the needs of the child and the special teacher.

6.6 Program

6.61 Partially seeing children in a resource program in the public schools shall work as much as possible in the regular classrooms with children of their own grade level, returning to the resource room for needed help and materials.

6.62 Partially seeing children on the itinerant program shall work in the regular classroom, except for scheduled periods with the special teacher. Programs shall be arranged on the basis of individual visual abilities, limitations and needs of the children.

6.63 Program planning for all partially seeing children in the public schools shall include time for:
6.631 Teaching.
6.632 Counseling.
6.633 Planning and preparing materials.

6.7 Equipment and Materials

6.71 Test books used in regular grades and corresponding texts in large type shall be provided for the use of partially seeing children.

6.72 Any special equipment and materials necessary to the education of partially seeing children shall be provided.

6.8 Teacher Qualifications

6.81 A teacher shall meet all the requirements for certification as set by the State Board of Education for this area of specialization.

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

ADMINISTRATIVE CRITERIA

APPROVAL OF TEACHERS IN SPECIAL EDUCATION UNITS FOR PARTIALLY SEEING CHILDREN EFFECTIVE 1963-64

State Board of Education Program Standards—SE 6.0

A. Teachers currently in service will be approved if they:

1. Hold a special certificate to teach partially seeing children or hold a standard certificate which has been validated to teach partially seeing children.
2. Hold a standard teaching certificate and submit evidence of intention to complete all certification requirements within a three-year period. Teachers so approved shall submit annual evidence of preparation status until the certification pattern is completed.

B. Teachers new to the program will be approved if they:

1. Hold a special certificate to teach partially seeing children as prescribed in Certification Standards adopted December 1961.
2. Submit evidence of the following:
   a. One year of teaching experience.
   b. Six semester hours of special preparation in the Education of Partially Seeing Children, as prescribed in Certification Standards adopted December 1961.
   c. Submit evidence of intention to complete all certification requirements within a three-year period. Teachers so approved shall submit annual evidence of preparation status until the certification pattern is completed.

C. Emergency Situations:

1. A teacher in service prior to September 1963 who meets with an emergency which prevents him or her from com-

pleting the certification requirements may have the time limits extended for one year.

2 In case of a vacancy, a teacher who holds a valid teaching certificate may be approved for the current school year.

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

CERTIFICATION LAWS AND REGULATIONS**

Teachers of Partially Seeing Children

A. An applicant for the provisional special certificate to teach partially seeing children shall submit evidence of the following preparation:

(1) A provisional certificate at the level for which the special certificate is requested.

(2) Nine (9) months of teaching experience at the level for which the special certificate is requested.*

(3) Eight semester hours of special preparation in the following pattern:

(a) Anatomy, Physiology and Hygiene of the Eye ..... 2 sem. hrs.

(b) Principles and Methods in the Education of Partially Seeing Children ..... 2 sem. hrs.

(c) Theory and Practice in the Education of Partially Seeing Children ..... 2 sem. hrs.

(d) Education of Multi-Handicapped Children ..... 2 sem. hrs.

* May be waived upon the satisfactory completion of six additional semester hours of observation and student teaching with partially seeing children.

** Adopted by State Board of Education December 11, 1961. Effective January 1, 1963.

Ohio Department of Education S.E. 5.2

DIVISION OF SPECIAL EDUCATION S.E. 6.2

3201 Alberta Street, Columbus 4, Ohio Rev. 1-62

S. J. Bonham, Jr., Director

EYE EXAMINATION REPORT

Name ..... Address .....

School ..... City ..... Grade .... Birth Date ..... Sex ...

Visual acuity without glasses: O.D..... Near O.D.....Point

O.S..... Near O.S.....Point

Correction giving best vision: O.D..... Near O.D.....Point

O.S..... Near O.S.....Point

History:

Examination:

Diagnosis:

Recommendations for care:

Is the condition stationary?

Examiner .....

Professional Title .....

Address .....
(Street)

City .....

Date of Examination .....

Please return in triplicate

PLACEMENT AND ENROLLMENT POLICIES

1. The following should be referred for placement in programs for visually handicapped:
   a. Children having visual acuity of 20/70 or less in the better eye after correction, or who cannot read smaller than 18 point print at any distance.
   b. Children with 10 or more diopters of myopia who are referred by the examiner.
2. Children who cannot use print as their chief channel of learning should be considered for placement in programs for blind.
3. Annual examination is required for all children enrolled.

NEAR VISION GUIDE

Point	*Near Point Acuity*	*Examples (approximate)*
24	Jaeger 14	"Sight Saving" texts
18	Jaeger 12	Books, children 7-8 years
14	Jaeger 10	Books, children 8-9 years
12	Jaeger 8	Books, children 9-12 years
10	Jaeger 7	Adult text books
9	Jaeger 6	Magazines
8	Jaeger 5	Newspaper texts
6	Jaeger 3	Telephone Directory
5	Jaeger 2	Want ads
4	Jaeger 1	Small Bibles
3	Jaeger 1 +	Mail order catalogues

Please submit
in *duplicate*

Form SE 5.0-2

Ohio Department of Education
DIVISION OF SPECIAL EDUCATION
3201 Alberta Street, Columbus 4, Ohio

REFERRAL OF VISUALLY HANDICAPPED CHILD

To: S. J. Bonham, Director, Division of Special Education

From: .....
Name of referring school district

.....
Mailing Address

I. *Identifying Data*

A. Child's Name ..... (Last, First, Middle)

B. Sex ..... Birthdate ..... Age ..... (yr. mo.) Grade .....

C. Parents' Names ..... (Father, Mother)

D. Parents' Address ..... (Number, Street, City)

E. Telephone ..... Date Referred .....

II. *Educational History*

A. SCHOOLS ATTENDED DATES GRADES

.....

.....

.....

B. Please attach copy of educational history, summary of marks and record of standardized group test results.

C. If child is not in school now give reasons: .....

.....

.....

III. *Previous Studies:* (Check)

A. Psychologist .....
B. Physician .....
C. Clinic .....
D. Psychiatrist .....
E. Health Department .....
F. Juvenile Court .....
G. Neurologist .....
H. Other .....

Please attach copy of report of any previous study indicated above. If not available include name and address of person conducting study.

IV. *Purpose of Referral:* .....

.....

.....

V. *Signature of Superintendent or Designated Representative:*

.....
Date Title Signature

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

S. J. Bonham, Director

EYE EXAMINATION REPORT

Name ..... Address .....

School ..... City ..... Grade ... Birth date ..... Sex ...

Visual acuity without glasses: Snellen (20ft)

O.D. ..... Near O.D. ..... Point

O.S. ..... Near O.S. ..... Point

Correction giving best vision:

O.D. ..... Near O.D. ..... Point

O.S. ..... Near O.S. ..... Point

History:

Examination:

Diagnosis:

Recommendations for care:

Is the condition stationary?

Examiner .....

Professional Title .....

Address ..... (street)

City ..... (city)

Date of Examination .....

Please return in duplicate

Submit in *Duplicate* Form SE 11.311

Ohio Department of Education Rev. Oct. 1961

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

Application for Individual Tutoring for Blind Children

School District ..... County .....

Name of Child .....

Address .... City ..... County .....

Date of Birth ..... Age ..... Grade in School .....

Measured Intelligence: Name of Test ..... Date Administered ..... Total I.Q. ....

Did child formerly attend special class? Partially Seeing .....

Blind .....

Where? ..... How long? .....

Name of school child now attends .....

Principal .....

Name of Tutor .....

Type of Certificate held .....

The following must accompany this application:

1. A recent eye report. This should be one completed within the year of date of application.
2. A summary of child's school progress.

(See Section 11.3 of State Board of Education Standards for Special Education)

Approved: Yes..... No.....
Not to exceed 5 hours per week at $3.00 per hour

.....
S. J. Bonham Jr., Director
Division of Special Education

Date .....

Signed .....

Title .....

Address .....

Date .....

Submit in *Duplicate* Form SE 14.22

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

Application for Guide Services for Child with Limited Vision

School District ..... County .....

Name of Child .....

Address ..... City .....

Date of Birth ..... Age ..... Grade ..... I.Q. .....

Type of class child attends:

Partially Seeing ..... Blind ..... Regular Class .....

Name of school child now attends .....

Name of Guide ..... Grade of Guide .....

.....

Superintendent or designated representative

.....

Address

.....

Date of Application

---

*Approved: .....

Disapproved: .....

Date: .....

.....

Director, Division of Special Education

Reimbursement is not to exceed 75 cents per day per child.

Submit in *Duplicate*

Form SE 11.411
Rev. Oct. 1961

Ohio Department of Education

DIVISION OF SPECIAL EDUCATION

3201 Alberta Street, Columbus 4, Ohio

Application for Reader for Child with Limited Vision

School District ..... County .....

Name of Child .....

Address ..... City .....

Date of Birth ..... Age ..... Grade in School .....

Measured Intelligence: Name of Test ..... Date Administered ..... Total I.Q. ....

Did child formerly attend a special class for Partially Seeing? ....

Blind? ....

Where? ..... How long? .....

Name of school child now attends .....

Principal .....

Name of Student Reader ..... Grade .....

The following must accompany this application:

1. A recent eye report. This should be one completed within the year of date of application.
2. A summary of child's school progress.

(See Section 11.4 of State Board of Education Standards for Special Education)

Approved: Yes..... No.....
Not to exceed 10 hours per week at 75 cents per hour

.....
S. J. Bonham Jr., Director
Division of Special Education

Date .....

Signed .....

Title .....

Address .....

Date .....

STATE OF OHIO

DEPARTMENT OF EDUCATION

3201 ALBERTA ST.
COLUMBUS 4, OHIO

E. E. HOLT
Superintendent of
Public Instruction

Division of Special
Education

Ohio State School
For the Blind

EVALUATION CLINIC REPORT

Name ..... M .... F .... Birthdate ..... Age .....

School District ..... Grade ..... Parents .....

Home Address ..... Date Examined .....

Referred by .....

Reason for referral .....

APPENDIX B

SAMPLES OF FORMS USED
in
COLUMBUS, OHIO STUDY

VISION SCREENING

School _____ Teacher _____ Grade _____ Room _____ Date _____

Class for Partially Seeing Yes _____ No _____ Nurse _____

No.	Name	Without Glasses Rt.	Left	Both	With Glasses Rt.	Left	Both	Re-Test Rt.	Left	Both	N.P.V. Rt.	Left	Both	Muscle Imb.	Remarks
1.															
2.															
3.															
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
16.															

CHILD'S DATA SHEET
(INCLUDING PREVIOUS TEST DATA)

In class for partially seeing? ....Yes ....No

Date .....

Name ..... Male ..... Female .....

Birth Date ..... Phone .....

Father's Name ..... School .....

Mother's Name ..... School Phone .....

Address ..... Teacher .....

..... Nurse .....

Intelligence and Achievement

I.

Intelligence Tests:

	Date	Name	Form	C.A.	M.A.	I.Q.
1.						
2.						
3.						
4.						

Group Ability:

	Date	Name	Form	C.A.	M.A.		I.Q.	
					Tot.	Non. Lang.	Tot.	Non. Lang.
1.								
2.								
3.								

Group Achievement:

	Date	Name	Form	Score	Grade Level
1.					
2.					
3.					
4.					
5.					

Test given in Lg. Print.....Reg. Print.....Oral.....

School Placement

II.

Present Grade ..... Type of Program ..... Year .....

Previous Grade ..... Type of Program ..... Year .....

Date entered school ..... Grade .....

Retained ..... Yes ..... No What Grade .....

Reading Media

III.

Regular Type ..... Large Type .....

Live Reader Service .....

Tapes ..... Talking Book .....

Vision

IV.

A. Familial History

Parents or siblings who are visually handicapped

1. 3.

2. 4.

B. Child's Vision

1. Nurse's Screening

Visual Acuity	Right Eye	Left Eye	Both Eyes
without correction	.....	.....	.....
with correction	.....	.....	.....
Near Vision			
without correction	.....	.....	.....
with correction	.....	.....	.....

Re-test

Visual Acuity	Right Eye	Left Eye	Both Eyes
without correction	.....	.....	.....
with correction	.....	.....	.....
Near Vision			
without correction	.....	.....	.....
with correction	.....	.....	.....

Evidence of Muscular Imbalance .....Yes .....No

Visual Evaluation by .....

2. Ophthalmologist's Screening

Visual Acuity	Right Eye	Left Eye	Both Eyes
without correction	.....	.....	.....
with correction	.....	.....	.....
Near Vision			
without correction	.....	.....	.....
with correction	.....	.....	.....

Diagnosis: .....

.....

Prognosis:

Age of Onset:

Visual Evaluation by .....

Title .....

Date .....

3. Optometrist's Screening

Visual Acuity	Right Eye	Left Eye	Both Eyes
without correction	.....	.....	.....
with correction	.....	.....	.....
Near Vision			
without correction	.....	.....	.....
with correction	.....	.....	.....

Low vision optical aids recommended .....Yes .....No

Type of aid .....

Recommended Reading Distance .....

Special Instructions for Use .....

.....

Examiner .....

Date .....

Medical

V.

A. Pediatric:

B. Neurological

Diagnosis .....

.....

Is this child on medication?

Examiner .....

Date .....

C. Electroencephalogram

within normal limits .....Yes .....No

Other Physical Handicaps

VI.

Cerebral Palsy .....

Epilepsy .....

Hearing Loss .....

Comments: .....

.....

.....

May 13, 1965

Dear Teacher:

Thank you for completing the Teacher Observation Sheet evaluating the classroom performance of children selected to participate in the Vision Research Project of the Columbus Public Schools. Answers to these questionnaires have helped immeasurably to add to the success of our study. I am sure that I speak for all participating groups in thanking you for your major contribution to this project.

Results of the examinations at the Ohio State School for the Blind have been returned to your school nurse. Questions relating to these tests should be directed to her.

Thank you again for your participation.

Sincerely yours,

(MISS) HELEN BLACK

HB/det

COLUMBUS PUBLIC SCHOOLS

SUPERINTENDENT OF SCHOOLS - HAROLD M. CAUVIN
ADMINISTRATIVE OFFICES • 270 EAST STATE STREET, COLUMBUS, OHIO 43215 • TELEPHONE 614-229-3871
ASSISTANT SUPERINTENDENTS - J. L. BAKER, C. L. CUMMINGS, L. W. HUBEN, F. T. RUSH, J. A. YOUNG

March 17, 1965

Dear Principal:

In this, the second testing phase of the Vision Research Project, children are being scheduled for physical and psychological examinations. Enclosed is a copy of an appointment which has been made for one or more youngsters in your building.

Thank you for your cooperation in this project.

Sincerely yours,

(MISS) HELEN BLACK

HB/dt

COLUMBUS PUBLIC SCHOOLS

SUPERINTENDENT OF SCHOOLS - HAROLD R. ERLING
ADMINISTRATIVE OFFICES • 270 EAST STATE STREET, COLUMBUS, OHIO 43215 • TELEPHONE 614-229-3021
ASSISTANT SUPERINTENDENTS - J. L. DAVIS, C. L. DUNKLES, L. W. KUHLER, C. E. RUFF, I. C. YOUNG

November 20, 1964

Dear Parent:

We plan to take your child to the Ohio School for the Blind, 5220 North High Street for testing on the ..... of ....., ..., ..., ..., ... should be in ..... own school office by ..... to be picked up there by taxicab. If we are unable to return the child to the school before 12:00, or before the school day is over, the taxi will bring the child directly to your house. The telephone number at the Ohio School for the Blind is *AM-3-1325*.

Sincerely yours,

(MISS) HELEN BLACK

Dear Parent:

Thank you for permitting your child to participate in the vision research project. Fortunately, the eye examinations showed that ..... vision can be corrected into the normal range. Therefore ..... does not qualify for our study of the learning problems of partially seeing children.

All records of your child have been released to the Department of Health of the Columbus Public Schools. Will you please contact your school nurse so that your child may receive further care. The school nurse will be happy to answer your questions.

Thank you again for your cooperation.

Sincerely yours,

(MISS) HELEN BLACK

HB/dt

COLUMBUS PUBLIC SCHOOLS

SUPERINTENDENT OF SCHOOLS – HAROLD M. EIBLING
ADMINISTRATIVE OFFICES • 270 EAST STATE STREET, COLUMBUS, OHIO 43215 • TELEPHONE 614-228-3821
ASSISTANT SUPERINTENDENTS – J. L. DAVIS, C. L. DUMAREE, L. W. HUBER, F. T. RUDY, I. F. YOUNG

June 23, 1965

Dear Parent:

Thank you for permitting your child to participate in the Vision Research Project of the Columbus Public Schools. Without your help this study could not have become a reality. The Ohio Departments of Education and Health as well as the Columbus Public Schools join me in thanking you for your contribution to this project.

The study is not complete, so we do not have a great deal of information to share with you at the present time. This material is being evaluated by the study participants including the school physician Dr. Carey Paul. It is hoped that by the fall of 1965 more information will be available, and at that time your school nurse will contact you.

Thank you again for your participation.

Sincerely yours,
(MISS) HELEN BLACK
Coordinator

HB/dt

Regular Class Children Referred from Nurse Vision Screening	School	Grade	Teacher	Release Forms Returned by Parents	Not Returned	Child Included In Study	*Not Included In Study

*Children whose vision can be corrected to better than 20/70 will not be included in the Research Study. The School nurse will follow-up on these cases.

COLUMBUS PUBLIC SCHOOLS

SUPERINTENDENT OF SCHOOLS – HAROLD M. EIBLING
ADMINISTRATIVE OFFICES • 270 EAST STATE STREET, COLUMBUS, OHIO 43215 • TELEPHONE 614-228-3821
ASSISTANT SUPERINTENDENTS – J. L. DAVIS, C. L. DUMAREE, L. W. HUBER, F. T. RUDY, I. F. YOUNG

May 13, 1965

Dear Nurses:

I would like to express my thanks for your kind assistance in screening and following up children in connection with the Vision Research Project of the Columbus Public Schools. It may interest you to know that from 23,613 children screened in the project, nine regular class children and two slow learning class children were selected for intensive study. Their visual acuity was 20/70 or less in the better eye after correction, or they required more than 10 diopters correction for myopia. The rest of the group came from children already in classes for the partially seeing. From this you can see that you have been doing a tremendous job.

Some thought must be given to the seventy-one children whose vision can be corrected to the normal range. Unfortunately, at the time of the initial screening they were functioning as partially seeing, for they were not wearing glasses. After follow-up, many of these undoubtedly have obtain the needed correction.

Your professional help has added immeasurable to the success of the study and made it in a real sense a "team effort." I am sure that I speak for the Ohio Departments of Health and Education, as well as the Columbus Public Schools, in thanking you most sincerely, for your group and individual participation.

Sincerely yours,
HELEN BLACK
Coordinator

COLUMBUS PUBLIC SCHOOLS

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December 3, 1964

Dear Parent:

The Columbus Public School System in cooperation with the State Department of Health and Education is conducting a research study to evaluate the learning problems of partially seeing children. The data so obtained should help us improve educational planning for this group of children. In addition, it should help us discover why certain youngsters with visual problems adjust well in regular classes, while others require special class placement.

We need your permission to include your child in this important study. He will receive the benefit of a very thorough medical and physical evaluation. An eye examination also will be included. As a parent of a child already identified as having a visual problem, we are sure that you will see the value of such research.

In the near future, we would like to transport your child by taxicab at our expense to the Ohio State School for the Blind. Our testing center is situated here for convenience so that we may use the School's facilities for our medical and physical examinations. Please show your willingness to cooperate by signing the enclosed release form.

Sincerely yours,

(MISS) HELEN BLACK

MEDICAL RELEASE FORM

The Columbus Public School System in cooperation with various state departments is conducting a research study of children with visual problems. Through a routine vision screening in the schools, your child has been selected as a possible candidate for further consideration. Information from this study should help us plan a better educational program for all partially-sighted school children. Therefore, we feel this research will be beneficial to students and to personnel conducting the study.

Within the next few months we would like to schedule your child for eye and medical examinations without cost to you. Please keep in mind that these tests are for educational purposes only, and will result in no medical recommendations. Arrangements can be made to have this information released to a physician of your choice. If you have further questions, telephone me at CA-8-3821 Ext. 266.

We are asking that you permit us to transport your child by taxi, at our expense, from the school which he attends to the Ohio State School for the Blind for eye examinations on two different school days. On each of these days he will be returned to his school at the conclusion of the examination. Please note that each time your child is to be taken to the Ohio State School for the Blind you will be given written notice at least a day before this is to take place.

You may recall from our recent conference that written permission for your child's participation in this study is necessary. Please sign the form and return by ..... in the enclosed envelope.

Thank you.

Sincerely yours,
(MISS) HELEN BLACK, Coordinator

I am interested in having ..... participate in the research project on the school performance of visually limited children.

I understand that this will involve transportation by taxicab to and from the Ohio State School for the Blind for eye and other medical examinations.

I further understand that I will be notified at least a day in advance of each appointment.

Signed .....
Parent or Guardian
(Underline which)

HB/det

November 12, 1964

Dear Parent,

The research project involving the learning problems of visually limited children is well underway and we appreciate your cooperation.

Now we need additional help. We are asking that you permit us to transport your child by taxi, at our expense, from the school which he attends to the Ohio School For The Blind for eye examinations on two different school days. On each of these days he will be returned to his school at the conclusion of the examination.

Please return this form if you will grant this permission. Please note that each time your child is to be taken to the State School For The Blind you will be given written notice at least one or two days before this is to take place.

Sincerely yours,
HELEN BLACK
Coordinator

I give my permission for .....
to have visual and medical examinations.

(Signed) .....
Parent or Guardian
(Underline which)

COLUMBUS PUBLIC SCHOOLS

SUPERINTENDENT OF SCHOOLS – HAROLD M. EIBLING
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Dear Mr

From ..... recent eye test at ..... School, it appears that ..... might have a vision problem. I am writing to get your permission to include ..... in a vision research project which is being conducted by the Columbus Public Schools. We are studying what effect, if any, visual problems have upon a child's school work.

For convenience, our Medical Center is set up at the State School for the Blind, and two eye doctors will examine the child there. ..... will be transported by taxicab at our expense, but we need your written permission to take ..... from school for a few hours. If ..... vision cannot be corrected into the normal range, we will want to schedule .... for further tests, including a rather complete medical examination. We are interested only in helping children with their school work, and will not be insisting that ..... get glasses, although we will give the test results to your own doctor if you wish.

I am sorry not to be able to explain this in person, but I believe you have no telephone. If you do have questions, call me at CA-8-3821 Ext. 266. May I urge you to sign the blanks and return them, for I feel this is a very worthwhile service which may never be offered again. I'll contact you when we are ready to make more definite plans.

Sincerely yours,

(MISS) HELEN BLACK

APPENDIX C

TEACHER OBSERVATION SHEET

AND

RESPONSES

TEACHER OBSERVATION SHEET

....., a pupil in your class, has been selected by routine vision screening for a special research study to be conducted this year in the Columbus Public Schools. Your reaction to the following points on the enclosed questionnaire will be most helpful.

Thank you.

HELEN BLACK
Coordinator

Grade: ..... School: .....
Teacher: ..... Date: .....

Place a check mark on the line to the left of the statement which *best* describes the behavior exhibited by the student most of the time.

I

CHARACTERISTIC—ACADEMIC ACHIEVEMENT

(in terms of others in class)

A. Numerical Skills: Additional Comments

( ) Below Average .....

( ) Average .....

( ) Better than Average .....

B. Reading Skills:

( ) Below Average .....

( ) Average .....

( ) Better than Average .....

C. Please Give Your Opinion Regarding the Effect This Child's Vision Has Upon His Academic Achievement:

( ) Very little/if any .....

( ) Some .....

( ) A great deal .....

D. In Your Own View Is This Child's Intelligence:

( ) Below Average .....

( ) Average .....

( ) Better than Average .....

E. Is This Child: Comments

( ) Overly aggressive or defiant .....

( ) Overly withdrawn or timid .....

( ) Neither .....

II

CHARACTERISTIC—PERSONAL ADJUSTMENT

F. Is This Child Independent in Work and Play?

( ) Works on own .....

( ) Needs average direction .....

( ) Needs constant supervision .....

G. Is This Child a Behavior Problem in His Present Grade?

( ) Seldom or never .....

( ) Not very often .....

( ) Quite often .....

H. Does This Child Require More Instructional Effort On Your Part Than Other Children in the Class?

( ) Seldom or never .....

( ) Not very often .....

( ) Quite often .....

I. Would You Rate This Child's Peer Relationships As Among:

( ) Worst in class .....

( ) Average in class .....

( ) Best in class .....

TEACHER OBSERVATION SUMMARY

A. NUMERICAL SKILLS

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Below Average	12	2	47	7
Average	14	3	53	14
Better Than Average	2	1	28	9

TEACHER OBSERVATION SUMMARY

B. READING SKILLS

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Below Average	14	1	42	11
Average	10	3	56	13
Better Than Average	3	2	31	6

TEACHER OBSERVATION SUMMARY

C. PLEASE GIVE YOUR OPINION REGARDING THE EFFECT THIS CHILD'S VISION HAS UPON HIS ACADEMIC ACHIEVEMENT:

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Very Little/If Any	1	2	36	28
Some	18	4	58	2
A Great Deal	8	0	35	0

TEACHER OBSERVATION SUMMARY

D. IN YOUR OWN VIEW IS THIS CHILD'S INTELLIGENCE:

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Below Average	11	1	31	9
Average	11	3	73	15
Better Than Average	5	2	24	6

TEACHER OBSERVATION SUMMARY

E. IS THIS CHILD:

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Overly Aggressive Or Defiant	2	2	25	7
Overly Withdrawn Or Timid	8	0	23	6
Neither	17	4	80	17

TEACHER OBSERVATION SUMMARY

F. IS THIS CHILD INDEPENDENT IN WORK AND PLAY?

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Works On Own	2	2	43	9
Needs Average Direction	14	3	58	13
Needs Constant Supervision	11	1	27	8

TEACHER OBSERVATION SUMMARY

G. IS THIS CHILD A BEHAVIOR PROBLEM IN HIS PRESENT GRADE?

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Seldom Or Never	23	3	66	14
Not Very Often	3	2	37	8
Quite Often	1	1	26	8

TEACHER OBSERVATION SUMMARY

H. DOES THIS CHILD REQUIRE MORE INSTRUCTIONAL EFFORT ON YOUR PART THAN OTHER CHILDREN IN THE CLASS?

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Seldom Or Never	7	2	67	8
Not Very Often	9	2	37	8
Quite Often	10	1	35	14

TEACHER OBSERVATION SUMMARY

I. WOULD YOU RATE THIS CHILD'S PEER RELATIONHIPS AS AMONG:

	Special Class Partially Seeing	Regular Class Partially Seeing	Corrected Vision	Normal
Worst In Class	4	1	20	2
Average In Class	19	5	78	19
Best In Class	3	0	31	9

APPENDIX D

CASE HISTORIES OF CHILDREN

IN

THE COLUMBUS, OHIO PARTIALLY SEEING STUDY

(1964-65)

CASE HISTORIES OF CHILDREN IN THE 1964-65 COLUMBUS, OHIO, PARTIALLY SEEING STUDY

Identification	Sex	D.O.B.	Grade	I.Q. Hayes	I.Q. Binet LM	Diagnosis—Etiology	Visual Acuity Distance	Visual Acuity Near	Other Handicaps	Wide Range Achievement Word Recognition	Wide Range Achievement Arithmetic	Comments
1.	M	4-15-52	6	95	76	Congenital Cataracts Searching Nystagmus	(Wearing Glasses) O.D. 20/200 J 8 @ 12″ O.S. H.M. @ 1′ Could not Obtain No change recommended			6.1	5.8	Posterior Synechia O.U. Secondary to needling. Partially Seeing Class
2.	F	2-17-53	6	125	127	Myopia Horizontal Nystagmus O.D. Optic Atrophy O.S.	(Wearing Glasses) O.D. 20/200+1 J 12 @ 10″ O.S. No L.P. No change recommended			8.5	7.5	Partially Seeing Class
3.	M	12-10-52	6	93	88	Congenital Nystagmus	O.D. 20/200 J 3 @ 7″ O.D. 20/200 J 3 @ 5″ Corrected O.D. 20/200 J 3 @ 7″ O.D. 20/200 J 3 @ 5″			5.4	5.9	Tends to blink eyes. Some photophobia. Some bleparitis. P.S. class
4.	M	4-10-54	3	84	80	Nystagmus Micro cornea O.U.	(Wearing Glasses) O.D. 20/200 J 12 @ 12″ O.S. CF @ 3′ Could not Obtain		Minimal neurological damage	2.7	3.1	Would not tolerate drops. P.S. class
5.	M	6-10-53	5	101	101	Optic atrophy Searching nystagmus	O.D. 10/200 J 10 O.S. 10/200 J 10 Corrected O.D. 10/200 J 10 O.S. 10/200 J 10			4.3	5.6	Partially Seeing Class
6.	M	2- 7-52	6	96	93	Myopia Probable birth injury involving both maculae	O.D. 8/200 J 6 @ 15″ O.S. 15/200 J 6 @ 15″			4.4	6.9	Partially Seeing Class

CASE HISTORIES OF CHILDREN IN THE 1964-65 COLUMBUS, OHIO, PARTIALLY SEEING STUDY

CONTINUED

Identification	Sex	D.O.B.	Grade	Hayes	Binet LM	Diagnosis—Etiology	Visual Acuity Distance Near	Other Handicaps	Wide Range Achievement Word Recognition	Wide Range Achievement Arithmetic	Comments
7.	F	5-25-52	5	78	80	Albinism	O.D. 6/200 J 14 O.S. 6/200 J 14 Corrected O.D. 10/200 J 10 O.S. 10/200 J 10		4.3	5.8	Partially Seeing Class
8.	M	6-16-53	3	81	84	Albinism	(Wearing Glasses) O.D. 20/300 J 12 @ 10" O.S. 20/300 J 12 @ 10" No change recommended		1.4	3.3	Partially Seeing Class
9.	M	3-18-53	6	127	125	Congenital Nystagmus	(Wearing Glasses) O.D. 20/200 J 10 @ 15" O.S. 20/200 J 10 @ 15" No change recommended		5.7	6.4	Partially Seeing Class
10.	F	10- 3-54	3	78	78	Micro cornea O.U.	O.D. Nil O.S. 20/70-1 J 1 @ 5"	Moderate neurological damage	2.7	2.3	Partially Seeing Class
11.	F	11-19-54	3	65	59	Marfan's Syndrome Dislocated lens O.U.	(Wearing Glasses) O.D. 20/400 J 14 O.S. 20/400 J Nil Corrected O.D. 20/200+2 J 14 O.S. 20/400 J Nil	Moderate neurological damage	2.3	1.8?	Partially Seeing Class. Should be watched for secondary glaucoma. May be malingering.

12.	M	10-3 -54	5	112	106	Congenital cataracts Nystagmus Epicanthus folds Microphthalmus Hyperteloriam	(Wearing Glasses) O.D. 20/200 J T O.S. 15/200 J T No change recommended	Moderate neurological damage	5.7	5.5	Partially Seeing Class.
13.	M	9-12-55	4	105	98	Congenital Nystagmus Hyperopia Esotropia	(Wearing Glasses) O.D.20/80-2 J 3 @ 10' O.S. 20/100+1 J 3 @ 10'		3.8	4.5	Partially Seeing Class. Ptosis and fine nystagumus to the left.
14.	M	6-1 -53	6	112	112	Bilateral optic atrophy	(Wearing Glasses) O.D. 20/200 J 8 @ 15" O.S. 20/200 J 8 @ 15"	Mild neurological damage	5.6	6.5	Moved out of state.
15.	F	5-25-54	4	88	88	Coloboma of iris, nerve and choroid	O.D. 20/200 J Nil O.S. 10/200 J 12		4.0	4.4	Partially Seeing Class. Child will not be helped by standard glasses.
16.	M	7- 5-54	4	97	88	Congenital nystagmus Possible optic atrophy	O.D. 20/200 J 8 O.S. 20/200 J 8 Corrected O.S. 20/200 J 8 O.S. 20/80 J T	Mild neurological damage	3.6	4.2	Partially Seeing Class.
17.	M	6-13-53	5	102	100	Optic atrophy Rotating nystagmus	O.D. 20/200 J T O.S. 20/200 J T		6.2	5.4	Partially Seeing Class. Resides outside of district.
18.	F	12- 3-53	5	93	91	Chorioretinitis Nystagmus Left esotropia Microphthalmia	O.D. 20/100 J 6 O.S. H.M. J Nil Cannot be improved				Tense, apprehensive. Partially Seeing Class.
19.	M	11-27-53	5	103	107	Congenital Coloreta	O.D. 5/200 J Nil O.S. 5/200 J Nil Corrected O.D. 20/200 J 12 O.S. 20/200 J 8		3.9	5.4	Resides outside district. Partially Seeing Class.

CASE HISTORIES OF CHILDREN IN THE 1964-65 COLUMBUS, OHIO, PARTIALLY SEEING STUDY

CONTINUED

Identification	Sex	D.O.B.	Grade	Raven	Binet I.Q.	Diagnosis—Etiology	Visual Acuity Distance	Visual Acuity Near	Other Handicaps	Wide Range Achievement: Word Recognition	Wide Range Achievement: Arithmetic	Comments
21.	M	7-23-54	4	88	84	High Myopia	O.D. FC @ 3' O.S. FC @ 4' Corrected O.D. 20/40 J 8 O.S. 20/70 J 8			4.0	3.8	Partially Seeing Class.
22.	F	9- 6-53	6	77	73	Thickened lens O.U. Myopia (underlying Marfan's syndrome)	(Wearing Glasses) O.D. 20/200 J 10 @ 15" O.S. 20/100 J 10 @ 15"		Mild neurological damage	4.4	5.8	Partially Seeing Class.
23.	M	3-11-53	6	100	103	Mixed Astigmatism Albinism	O.D. 10/200 J 10 O.S. 10/200 J 10 Corrected O.D. 15/200 J 10 O.S. 15/200 J 10			5.3	6.7	Regular Class
24.	F	9- 3-53	5	68	81	Myopia	O.D. 20/200 Unable to Obtain O.S. 10/200 " " Corrected O.D. 20/70 Unable to Obtain O.S. 10/200 " "			3.8	4.1	Child thought to be nearsighted. Should be seeing better. Rx O.D.-.50-.25x90 O.S.-1.00-0.75x90 Regular Class
25.	M	11-12-54	4	126	121	Optic Atrophy	O.D. 2/200 NI O.S 2/200 NI Corrected O.D. 4/200 J 14 O.S. 20/70 J 3		Very minimal neurological damage	7.4	5.8	Right Esotropia Straining Nystagmus O.D. Amblyopia Regular Class

25.	F	2-30-54	4	74	68	Astigmatism	O.D. L P Not tested O.S. No L P " " Corrected O.D. L P O.S. No L P	Abnormally slow physical development. Unpredictable behavior	4.8	2.7	Answers grossly inadequate—performance does not correspond to v.a. as given. High degree of astigmatism Rx O.D.+1.00-2.50x160 O.S.+ .50-1.75x30 Regular Class
26.	F	11- 4-53	5	80	74	Primary Central Pigmentary Degeneration	O.D. 15/200 J 8 O.S. 15/200 J 8 Corrected O.D. 20/200 J 8 O.S. 20/100 J 8		5.1	5.0	Regular Class
27.	F	4- 6-55	4	126	120	Uveitis Anisometropia Congenital Nystagmus	O.D. 10/200 J 7 O.S. 20/200 J 3 Corrected O.D. 10/200 J 3 O.S. 20/200 J 3		5.2	4.8	Regular Class
28.	F	4- 7-55	4			Myopia Astigmatism	O.D. 20/100 ? O.S. 20/100 ? Corrected O.D. ? ? O.S. ? ?				Not included in intensive study. Rx O.D.-2.25-.25x100 O.S.-2.00-.25x80 Regular Class
29.	M	6- 4-53	6		95	Extreme Myopia	O.D. 20/400 — O.S. 20/400 — Corrected O.D. 20/60 J 3 @ 8" O.S. 20/60 J 3 @ 8"				Not included in intensive study. Rx O.D.-12.50 sphere O.S.-12.50 sphere Regular Class
30.	M	12- 4-55	4			Nystagmus Left Esotropia 5° Left Amblyope	O.D. 20/70 — O.S. 20/70 — Corrected O.D. 20/70 — O.S. 20/70 —				Not included in intensive study. Regular Class

CASE HISTORIES OF CHILDREN IN THE 1964-65 COLUMBUS, OHIO, PARTIALLY SEEING STUDY

CONTINUED

Identification	Sex	D.O.B.	Grade	Hayes	Binet LM	Diagnosis—Etiology	Visual Acuity Distance / Near	Other Handicaps	Wide Range Achievement: Word Recognition	Wide Range Achievement: Arithmetic	Comments
31.	M	1-12-54	SL	53	48	Subnormal vision (sub dural hematomas)	O.D. 20/400 J 3 O.S. 20/100 J 16 Corrected O.D. 20/400 J 8 O.S. 20/100 J 14	Moderate neurological damage	0	0	Slow Learning—Partially Seeing
32.	M	5- 4-53	SL	63	64	Cataracts Nystagmus	(Wearing Glasses) O.D. 20/200 J 10 @ 1" O.S. C.F. @ 2' Corrected No change recommended	Minimal neurological damage	1.6	2.3	Slow Learning—Partially Seeing
33.	M	4- 4-55	SL	68	64	Coarse Nystagmus Marked Optic Atrophy	(Wearing Glasses) O.D. H.M. J 14 O.S. L.P. J 14 Corrected No change recommended	Minimal neurological damage	2.0	1.8	Slow Learning—Partially Seeing
34.	F	11- 1-55	SL	72	67	R L F Cross Nystagmus	O.D. L.P. — O.S. 20/160 J 8	Minimal neurological damage	1.7	0	Retinal detachment O.U. (almost complete)—Slow Learn.-Part. Seeing
35.	F	10-21-54	SL	62	65	Congenital Aniridia Mild optic atrophy	O.D. 10/200 J 24 @ 3" O.S. 12/200 J 12 @ 3" Corrected O.D. 20/200 O.S. 20/200		1.4	2.0	Should be watched for secondary glaucoma. Slow Learning—Partially Seeing

88.	M	8- 6-25	WL	84 79	Gross Nystagmus Congenital Cataracts			2.1	2.3	No information— resides outside district. Slow—Learning— Partially Seeing.